TOWARDS A DEFINITION OF ANTONIN RAYMOND'S "ARCHITECTURAL IDENTITY"

-A STUDY BASED ON THE ARCHITECT'S WAY OF THINKING AND WAY OF DESIGN-

アントニン・レーモンドの建築的アイデンティティの解読

－建築家の思考方法と設計方法の研究－

February 2008

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ACKNOWLEDGEMENTS

I would like to express my gratitude to the Japanese Ministry of Education 文部科学省, and the Shadan-hōjin Kenchiku-gyō Kyōkai 社団法人建築業協会, for granting me the scholarships that allowed me to complete my doctor course at Kyoto University.

I would like to thank Professor Takamatsu 高松 伸 and Takeyama 竹山 聖 of Kyoto University for accepting me in their laboratories, where I was able to carry out my research on Antonin Raymond. I would like to express my gratitude to Professor Monnai 門内 輝行 of Kyoto University for his moral and technical support, and to Professor Maeda 前田 忠直 for his advice and for accepting to be part of my jury.

I would like to thank Raymond's Architectural Design Office in Tokyo, for giving me access to their archives, in which I was able to find the invaluable material I needed for the analysis of Raymond's residential designs. I would like to thank more particularly Matano Norisuke 的埜 教介 who provided precious assistance in the locating of the drawings that were relevant to my research and also for dealing with the practical matters of the drawings reproduction.

I would like to express my sincere gratitude to Mr and Mrs Kitazawa Koichi 北澤 興一 (former member of staff at Raymond's Architectural Design Office and present owner of Shin Karuizawa Studio) for their hospitality during my trips to Karuizawa, where I collected the majority of the original photographs included in this thesis and in my database, as well as Raymond's essays, which constitute the most valuable source of information on Antonin Raymond's architectural discourse and philosophy of design.

I would like to express my sincere gratitude to Matsuoka Atsuhiko and Reiko 松岡 淳彦, 松岡 玲子, residents of Karuizawa and defenders of its architectural and natural heritage, for their genuine interest in my work and their kindness. I would like to thank them particularly for their hospitality and guidance around Raymond's houses in Karuizawa.

I would also like to thank my dear friends Evelyne Mesnil and Kobayashi Tsuneyoshi 小林 恒義 for their kindness, encouragement and support, and Nakayama Yūmiko 中山 裕美子, for her invaluable help in the reading of Japanese material. I thank my family, Peter Hilary, and those who despite the distance have in whatever way contributed to this achievement. Thank you to my dear friends in Kyoto, and fellow researchers Benoit Jacquet and Andrea Yuri Flores Urushima, and their little Hanae, for being part of what turned out to be more than just an experience, a true piece of life.

ABSTRACT

This thesis presents a study on the way of thinking and way of design of the Czech born architect Antonin Raymond (1888-1976). The data used for this study was a series of lectures and articles written by Raymond between 1935 and 1967 and original architectural drawings and photographs. These documents were all collected personally by the author at Raymond's former studio in Karuizawa and Architectural Office in Tokyo. These documents provide a new source of information on Raymond's residential work and have been compiled in an electronic database available with the thesis. The database includes architectural drawings, original and contemporary photographs, and general information on a majority of the residential works designed by Raymond between 1920 and 1938.

The aim of this thesis is to answer the following question: what is the core quality or concept that identifies a work of architecture as Raymond's? In order to answer this question, the thesis presents a study on the identity of Antonin Raymond as an architect, which the author has chosen to refer to as "Architectural Identity". The essential quality of Raymond's "Architectural Identity" is defined through the study of the architect's way of thinking, way of design, and the relationship between the two. These three elements are considered by the author as the three components of "Architectural Identity". For the study of Raymond's way of design, the thesis focuses on one residential project, which is Raymond's own summer house, built in Karuizawa in 1933.

The thesis is divided into five chapters:

Chapter 1 presents the field of study, explains the value of a research on Antonin Raymond and provides an outline of the thesis.

The author explains her reasons for choosing the "private house" as field of study as follows:

1- Private residences represent the majority of Raymond's commissions during his first eighteen years of practice in Japan (1920-1938). This period represents the most important period in the formation of Raymond's "Architectural Identity".

2- The private house occupies a particularly important place in the birth and development of modern architecture in Japan. Because of its reduced scale and private character it served as a medium through which the pioneers of modern architecture could experiment and express their new ideas with relative freedom.

3- Japan's tradition for residential architecture occupies a key position in the development of Raymond's way of thinking and design as a modern architect.

4- The private house provides the best material for the study of the architect's way of design because of the level of intimacy that it involves between the architect and the built object. This is especially true in Raymond's case since his most interesting residential works were designed for himself and his family.

To this day, the most important works dealing with the life and architecture of Antonin Raymond are those produced by Hiroshi Misawa in Japan and by Kurt G. Helfrich (PhD) and Ken T. Oshima (PhD) in the United States. These works have provided thorough and valuable information on Raymond's life, career and design, without which the present study would not have been possible. By focusing on a limited period of time and on one particular work, this study represents a step forward towards a deeper understanding or "decoding" of Raymond's way of thinking and of the creative process involved in his way of design. The concept of "Architectural Identity" which has been articulated in the present thesis also creates a potential for further research beyond the particular case of Antonin Raymond. Finally, the database presents graphic material that was until now lacking but is essential for any study in the field of architecture.

Chapter 2 deals with Antonin Raymond's background. The purpose of this chapter is to understand how Raymond's early years and the time he spent with Frank Lloyd Wright at Taliesin shaped his sensitive and intellectual outlook on life and prepared him for his encounter with Japan. The author emphasises the idea that ultimately, it is this background that determined Raymond's allegiance to the principles of traditional Japanese architecture.

Raymond spent his childhood in a small town house standing on the corner of the main square of Kladno. Kladno was a small industrial town on the outskirts of Prague in Bohemia (contemporary Czech Republic). The young boy also spent a great amount of time at his grandparent's farm in the countryside. In Kladno, Raymond became aware of the value of tradition communicated through examples of Renaissance, Roman and Baroque architecture. But the young boy also became aware of a growing gap between people's lifestyles and the spaces in which they lived. This double feeling of respect and rejection towards the architecture of the passed further developed in Prague while Raymond was attending the Technical School. Raymond deeply admired Prague's architectural heritage while witnessing the birth of the Czech cubist movement and discovering the works of Frank Lloyd Wright published in architectural journals. Modern architecture presented itself to Raymond as a necessity and a remedy for the future.

Raymond's awareness and connection with nature developed during time spent at his grandparents' farm. The author points out that it is this period of his life that provides the

key to an understanding of his further relationship with Frank Lloyd Wright. This relationship was based on a common love of nature, a common ideal of agrarian life and a common taste for the arts, which both architects had acquired through their education.

Chapter 3 provides an insight into the architect's "way of thinking". This chapter first discusses the nature of Raymond's architectural discourse through the study of a series of essays, lectures and articles written by Raymond between 1935 and 1964. Based on criteria given in the field of Architecturology, the study points out that Raymond's discourse is of a doctrinal nature. Architecturology deals with the creative process involved in architectural design and can be affiliated to the field of cognitive science. An architectural discourse is doctrinal when the architect uses various concepts with the purpose of promoting his ideas rather than discussing the definition or the value of the concepts themselves. Raymond's writings testify for his will to play an active part in the debate on modern architecture, to share his experience as an architect in Japan, and to promote the principles of Japanese traditional architecture as a solution for modern architecture.

This chapter also presents Raymond's point of view on the definition of the "Architect" as an "artist", and "engineer/master-builder" and a "guide". The author shows how Raymond's conception of the architect as an "artist" was shaped by his own experience of art, which was at the center of the education he received at elementary school. Raymond further deepened his experience as an artist when he temporarily gave up his career as an architect to become a painter in New York and Italy (1914). The author shows that in Raymond's way of thinking the purpose of the architect as an artist is emphasized as the expression of beauty. The architect must also combine the qualities of an engineer in order to secure freedom in design, and in order to achieve the most "economical" solution to a problem. The author points out the influence of Japan on this point of view, where traditionally the "architect" in the western sense of the word did not exist, and where the carpenter combined the qualities and the skill of architect, engineer and builder. Finally, the author points out the role of the "Architect" as a guide for other architects and for society. In the case of Raymond, this quality appears through his writings which are for the majority in the form of lectures given at architectural associations and articles published in newspapers and in lifestyle or architectural magazines.

Chapter 4 provides an insight into the architect's "way of design". The material used for this study is the data collected by the author. The first part of the chapter provides

general information on the development of architectural practice in Japan during the Taisho period and describes the composition and evolution of Raymond's office in the inter war period.

The second part of the chapter presents a study on the use of *tatami* and its influence on plan composition in a selection of Raymond's residential works designed in the inter war period. The author presents the results of a survey of the function and space given to *tatami* rooms in these residential works and the results of a comparison between houses designed for western clients and houses designed for Japanese clients. This survey reveals Raymond's response to the transformation of lifestyles and it's impact on residential design during the 1920s and early 1930s in Japan. It also partly reveals the design process through which Raymond operated a synthesis between western architecture and Japanese traditional architecture through the use of *tatami* as a proportion module.

The study of this synthesis is further deepened in the third part of the chapter, through the architectural analysis of Raymond's Karuizawa house (1933). The author points out the western and Japanese elements that came into the composition of Karuizawa house, and the way they were combined. This study reveals a certain complexity in the design process of Karuizawa house. It shows the particular influence of *Sukiya* and *Minka* architecture on Raymond's esthetic values and way of design. In parallel, it shows that by borrowing the plans of Le Corbusier's unbuilt Errazuris house, Raymond made a strong and clear statement about his intention to be a modern architect and to be considered as a member of the modern movement. This analysis emphasizes the dialectic relationship between Western forms and Japanese way of design and construction in the case of Karuizawa house.

Chapter 5 focuses on the relationship between the architect's way of thinking and way of design in the case of Karuizawa house. The purpose of this chapter is to find out in what manner Karuizawa reflects Raymond's way of thinking. On a theoretical level, this chapter thus explores the level of "coherence" in the relationship between Raymond's way of design and way of thinking.

Through a survey of Raymond's writings, the author lists a number of concepts which are at the center of Raymond's architectural discourse. The author points out the connection between these concepts and the fact that these concepts in fact all relate to the "mother concept" of "simplicity". "Simplicity" emerges as the core concept of Raymond's architectural discourse.

In the second part of the chapter, the author re-examines Karuizawa house in perspective

with the principle of “simplicity”, emphasizing how Raymond translated this principle in his way of design. This study shows how Raymond achieved simplicity in his design by pursuing the most economical solutions in the design through use of natural materials left as close as possible to their original state. In the context of Japan, Raymond found an expression of the concept of simplicity at its best in *Sukiya* architecture.

The third part of the chapter places the principle of “simplicity” in perspective with ideas defended by the modern movement at the time of Raymond’s design. It points out the fact that “simplicity” as a principle was emphasized partly to a reaction against the architectural establishment which defended the practice of historical styles in architecture.

論文内容

本論文は、チェコ生まれの建築家アントニン・レーモンド（1888−1976）の建築理論並びに建築作品に関する研究である。研究の目的は、レーモンドが日本で設計した住宅作品を対象として、レーモンドの「建築的アイデンティティ」（Architectural Identity）が、彼の「思考方法」（way of thinking）と「設計方法」（way of design）、及び「両者の相互関連」の帰結であることを示すことにある。研究にはオリジナルの建築図面、写真、レーモンド自身が 1935 年から 1967 年に執筆した論考が用いられているが、これらの資料はかつて軽井沢にあったレーモンドのスタジオや東京の設計事務所が所有するものであり、それを著者が独自に収集し、レーモンドの住宅作品に関する一次資料のデータベースとして構築したものである。

本論文は 5 章、及び住宅作品のデータベースからなる。

第 1 章では、レーモンドに関する研究の意義を説明するとともに、論文の概要を提示している。レーモンドは様々なビルディングタイプの設計を行っているが、本論文は住宅作品に焦点を当て、東京で建築家として独立した 1920 年から第 2 次世界大戦前に日本を離れるまでの期間を対象とする。研究対象を住宅作品に限定した理由は下記の通りである。

1. レーモンドが「建築的アイデンティティ」を形成する上で重要な意味を持つ日本における最初の 18 年間のプロジェクトの大部分が、住宅作品であったこと。
2. 小規模で私的な性格を持つ住宅作品は、建築家が自らの新しいアイデアを実験するのに適した媒体であり、それゆえに日本の近代建築の黎明期に重要な役割を果たしたこと。
3. 日本の住宅建築の伝統が、近代建築家としてのレーモンドの思考方法や設計方法の形成に大きな影響を及ぼしたこと。
4. 建築家の設計方法を分析する上で、住宅作品が最適な素材となること。建築家の思想と住宅作品には密接な関係があり、特にレーモンドの場合、最も興味深い住宅作品が自邸として設計されているために、そのことが当てはまる。

既往研究としては、日本では三沢浩が、アメリカでは Kurt G. Helfrich と Ken T. Oshima らが、レーモンドの生涯と建築について幅広く論じている。それに対し本論文は、レーモンドの思考方法や設計方法に含まれる創造過程をより深く解読しようとするものである。

第 2 章では、アントニン・レーモンドが育まれた背景を扱っている。本章の目的は、レーモンドの若き日々や、タリアセンでのフランク・ロイド・ライトとともに過ごした日々が、レーモンドの感性や知性をいかに形づくり、また日本との出会いを準備してきたかを明らかにすることにある。ボヘミア（現チェコ共和国）の小さな街 Kladno でその

幼少期を過ごしたレーモンドは、歴史建造物に敬意を払う一方、それらが人々のライフスタイルと乖離していることに気付いていた。そして、プラハの建築文化遺産を深く敬愛しつつ、チェコのキュビストの運動に関心を抱き、さらに建築雑誌を通してフランク・ロイド・ライトの作品を発見し、未来を改善する手段として近代建築のあるべき姿を見出していたのである。
レーモンドの自然に対する気配りは、幼少期の祖父母の農園での体験の中で育まれたものであるが、本論文では、このことが、フランク・ロイド・ライトとの関係の理解やレーモンドの伝統的な日本建築の諸原理に対する理解にも大きく関係していると指摘している。

第３章では、レーモンドの「思考方法」を考察している。1935 年から 1964 年にかけて執筆された随筆・講義・論文等の研究をふまえて、建築論（Architecturology）の観点から、レーモンドの建築的論述の教義的特性を明らかにしている。その中でレーモンドは、近代建築に関する議論において積極的な役割を果たし、日本での建築家としての経験をふまえて、日本の伝統建築の原理を近代建築に適用することを推奨しているのである。
　また、レーモンドによる「建築家」の定義に注目し、「芸術家」、「エンジニア/マスター・ビルダー」、「先導者」としての建築家のあり方が提示されていることを指摘している。すなわち、「芸術家」としての建築家は、「美」の表現をめざすこととこと、「エンジニア/マスター・ビルダー」としての建築家は、美を最も経済的に実現するためにエンジニアの資質を合わせ持つ必要があること、「先導者」としての建築家は、他の建築家や社会の先駆者としての役割を担わなければならないことなどを明らかにしている。

　第４章では、独自に収集した資料をもとに、レーモンドの「設計方法」を考察している。第１に、大正時代の日本の一般的な設計業務の実態とレーモンド事務所の設計活動について説明している。第２に、その間に設計された住宅作品を対象に、畳の使用法とそのプラン構成への影響を分析している。この調査を通して、ライフスタイルの変化に対するレーモンドの設計解と、それが 1920 年代から 1930 年前半の日本の住宅設計に及ぼした影響を明らかにしている。具体的には、レーモンドが畳をモジュールとして使用することにより、西欧建築と日本の伝統建築のシンセシスを行っていることを指摘している。第３に、レーモンドの軽井沢の自邸（1933 年）における設計過程を分析し、彼の設計方法の本質が複雑なシンセシスを通して達成された西欧建築と日本建築の結合にあることや、レーモンドの美的価値や設計方法には数奇屋や民家の影響が認められることを明らかにしている。また、この作品がル・コルビュジェの Errazuris 住宅をもとに設計されていること、そしてそのことは彼が近代建築の建築家の一人であることの表明であったことを指摘している。

第５章では、レーモンドの「思考方法」と「設計方法」の「関係」を探究している。具体的には、軽井沢の自邸に焦点を結び、レーモンドの「思考方法」をどのくらい写し出されているかを解読し、彼の「設計方法」と「思考方法」の関係に「一貫性」（coherence）のレベルが認められることを理論的に明らかにしている。すなわち、レーモンドの論考の分析を通して、彼の建築的論述の中に認められる数多くの概念を抽出し、これらの概念がいずれも「簡潔性」（Simplicity）という主導原理に関連していることを指摘している。

そして、「簡潔性」という点から軽井沢の自邸の住宅作品の再分析を行い、レーモンドが設計過程においてこの原理をどのように翻訳しているかを示すとともに、「簡潔性」という原理をより広い視点から近代建築運動がめざした概念と関連づけることにより、当時の歴史主義的権威に対抗するために強調された側面もあることを指摘している。

以上をふまえて、西欧と日本の総合をめざしたユニークな建築家アントニン・レーモンドの「建築的アイデンティティ」を規定する諸要因を総括し、「思考方法」、「設計方法」、及び両者の「関係」に関する考察をまとめている。

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CHAPTER 1
GENERAL INTRODUCTION AND OUTLINE OF THE THESIS

1 Field of Study

1.1 The private house

Upon arriving in Japan, my initial interest in the 'private house' was soon aroused by the numerous examples of residential architecture I discovered in Kyoto and its surroundings. This introduction to the traditional and contemporary architectural culture of Japan was coupled with the discovery of the process through which houses made of "wood, straw and paper" built by carpenters, had evolved into raw concrete blocks designed by internationally acclaimed architects. As a consequence of my initiation to the birth and development of modern architecture in Japan, I began to develop a particular interest in the work of the Czech born architect Antonin Raymond, and more particularly in his residential works. It was this experience, added to my personal experience of the 'private house' that prompted me to undertake the research presented in this thesis.

The philosopher Gaston Bachelard refers to the 'house' as "*our first universe*"[1]. He wrote that: "*A geographer or an ethnographer can give us descriptions of very varied types of dwellings. In each variety, the phenomenologist makes the effort needed to seize upon the germ of the essential, sure, immediate well-being it encloses. In every dwelling, even the richest, the first task of the phenomenologist is to find the original shell*."[2] Indeed, the house is something which responds to every human's need for shelter and where we first learn to be in the world. It is the place through which individuals and small groups simultaneously define and express connections and boundaries between their inner world, which Christian Norberg-Schulz [3] calls 'microcosm' in his phenomenology of architecture, and the outside world, or 'macrocosm'. It is also the means for man to identify with his environment, that is, to acquire and express a sense of belonging, which is essential to his equilibrium. That is why the outside world should be considered both in terms of natural and human environment. The house is a shelter for the physical body, but also for man's consciousness of being in the world and for his dreams. Therefore, through and beyond formal or functional considerations, any house can be expected to echo ones personal needs, conscious and unconscious.

1.2 The private house as built object

Now if the task of the phenomenologist is to "*find the initial shell*", to observe and define how people manifest their "habitation", what can we say about the task of the architect? The task of the architect should be to give physical form to this "*initial shell*", this "*castle*", that is, to give a physical body to the manifestation of habitation.

From a practical point of view, the 'private house' is characterised by a detached structure designed for a family or small group of individuals, in response to their particular needs within a particular environment. The physical form of the "private house" is revealed in its architecture, and it is upon this dimension that the present dissertation focuses. Other dimensions of the house, such as the social and economical aspects, are nevertheless discussed when it contributes to the deepening of our knowledge of the private house as an architectural entity. Architecture is concerned with life, and therefore cannot be apprehended from a strictly unique point of view. This is clearly expressed by Frank Lloyd Wright, in one of his numerous speeches in defence of organic architecture: "*Perfect correlation, integration, is life. It is the first principle of any growth that the thing grown be no mere aggregation. Integration as entity is first essential. And integration means that no part of anything is of any great value in itself except as it be integrate part of the harmonious whole.*"[4] It is only for the sake of scientific accuracy demanded in the context of such a research that we are compelled to establish boundaries between the many dimensions of architecture and to choose to focus on one of them.

As far as the physical manifestation of architecture is concerned, the 'private house' can be defined as: "*the fundamental building block, the most irreducible component, of the man-made environment, providing the most basic of daily needs, shelter*." [5] Phenomenology of architecture states that it can be considered as the way man physically 'visualises' "*how human life takes place between earth and sky*"[6].

1.3 The private house in Japan

In an interview, Professor Terunobu Fujimori reminded us that "*In Japan, the small home was the medium for the first expressions of modernist residential architecture*."[7] Nowadays, Japan still provides examples of traditional, pre war period and contemporary modern private houses. Despite the massive destruction caused by the Second World War, the aftermath and the following economical boom, the country maintains its ancestral tradition for residential architecture. Japanese residential architecture has been a source of inspiration for modern architects since the beginnings of modern architecture in Europe and America. The most famous and earliest of its

advocates was undoubtedly Frank Lloyd Wright, who came in contact with Japanese architecture from 1890. He mainly drew his inspiration from Japanese prints for which he developed a consuming passion[8]. He started making regular visits to Japan from 1914. According to Wright's own words, the prints taught him "*a lesson in elimination of the insignificant and in the beauty of the natural use of materials.*"[9] Other testimonies in writing of the west in Japanese residential architecture are also to be found in the works of Edward S. Morse[10] in 1885, Ralph Adams Cram in 1905[11] and more famously Bruno Taut in 1937[12], who introduced Katsura detached palace to the West in the perspective of modern architecture.

1.4 The private house in Antonin Raymond's career

In Japan, Antonin Raymond is commonly well-known for post war buildings such as the Reader's Digest Building in Tokyo (1951) and the Gunma prefecture Music Centre (1961), which are mainly praised as examples of his effort and contribution to the development of concrete architecture in Japan. However, the architect applied a large part of his reflection and creativity to the architecture of the private house. During his 44 year career in Japan, more than 70[13] of the private houses designed in his office were built, most of them in Tokyo or the relatively close summer retreat, Karuizawa. In Karuizawa Antonin Raymond built a series of house, the most famous of which is his own house designed in 1933. This particular house will be the object of a thorough analysis in the fourth chapter.

Raymond's clients were long term foreign residents, members of the Japanese aristocracy and business men. From a practical point of view, this meant designing houses which were on one hand adapted to a western way of life while taking into consideration the limited construction techniques of the times, other than wooden structures, the rather extreme climate and the permanent risk of earthquake. On the other hand, the architect had to design houses that would allow his clients to combine both Japanese and Western ways of life. This for example implied combining Japanese more or less formal tatami rooms as well as rooms in which western style furniture could be displayed. Either way, during the first stage of his stay, it is through the observation and the design of the private house in Japan that Antonin Raymond was able to experiment and refine his ideas regarding the application of the principles of modern architecture.

2 The private house and modern architecture

2.1 A notion of "modernity"

In the context of the present work, the reason for my choosing the private house as field of study contains two aspects, one being connected to Japan's own architectural culture for residential design as we have seen. The other reason is to be found in the very nature of modern architecture.

All the architects who have left a significant mark in the history of building and design have applied their creativity and thought to the private house. Beyond their nationality, their political beliefs, their intellectual and religious background, pioneers of modern architecture were unified by the common purpose of creating a new dwelling, one that would most appropriately fit and most faithfully reflect the life of the 'modern man'. Otto Wagner had formulated this idea as early as 1894, in the book written for the students at the Academy of Vienna: "*our starting point for artistic creation is to be found only in modern life*."[14] Later, in the 1924 introduction to the second edition of his book, *Towards a New Architecture*, Le Corbusier talks of the modern man in the following terms: "*The architecture of today is concerned with the house, the ordinary and common house for the ordinary and common man. It has done away with palaces. This is a sign of our times*."[15]

These words, pronounced by two of the most important architects in the history of modern architecture, convey the idea that the concept of 'modernity' should be understood as a state of mind, as an outlook on life. Consequently, the expression of modernity should always be rooted in this idea or vision. I will further develop this point in direct connection to the subject of this thesis, but for the time being, let us bear in mind that the 'modern man', who is at the centre of modern architecture, is a man in phase with his time. If we apply this idea to architectural design, this means that the term 'modern' refers to a certain 'kind'[16] of architecture rather than an architecture primarily defined by form. It is in this sense that 'modern architecture', as a concept, will be referred to in this thesis. In the most recent and complete book on the history of modern architecture, William J. R. Curtis reminds us that 'modern architecture' "*was an invention of the late nineteenth and early twentieth centuries*"[17] and emphasizes the antagonistic stance upon which it was based, therefore reminding us that architectural creation should always be apprehended in the context of its era. He also continues by saying that "*basic to the notion of a modern architecture was the notion that each age in the past had possessed its own authentic style, expressive of the true tenor of the epoch.*"[18] It is precisely this notion of modern architecture to which I would like to follow in my thesis, and we will particularly look at the implications of such a choice in

the third and fourth chapter of this dissertation. Consequently, ‘modern architecture’ will not be used specifically in reference to any given number of architectural works created between 1910 and 1930 by famous architects, nor will it be reduced to the style of buildings that have come to be grouped together under the appellation of ‘International style’.

2.2 Modernity as a philosophy of design

Beyond their individual achievement in terms of architectural design, Frank Lloyd Wright, Le Corbusier, Mies van der Rohe and Alvar Aalto - to cite only a few among the pioneers of modern architecture – were united by a common purpose. That is as we have seen earlier, the will and desire to design a house in phase with its time. The outcome of their endeavour was embodied in beautiful works of architecture, but equally importantly for the sake of future generations of architects, in the establishment of a new line of approach, of a new philosophy of design. This particular point will be developed in the thesis. Such a philosophy of design is revealed in the architect’s writings, although some were more inclined than others to lay their ideas on paper in the form or words as well as in the form of drawings. Frank Lloyd Wright and Le Corbusier are of course famous for this aspect of their work and we will have the opportunity to approach this dimension of the Antonin Raymond’s work in the thesis. In any case, the pioneers of modern architecture formulated their philosophy of design and hoped it would guide younger generations of architects. If applied earnestly, it would enable them to design houses and buildings for the man of ‘today’, whenever ‘today’ may figure on a time scale. The pursuit of such a philosophy constitutes a timeless link between the pioneers of modern architecture and the architects of our contemporary era. With this work my intention is to make a modest contribution to the development and knowledge of such a philosophy of design, and to emphasize its timelessness.

2.3 Common grounds of modern and Japanese traditional architecture?

In echo to professor Fujimori’s words quoted previously, we may say that the private residence also play a crucial role in the development of modern architecture in Europe and America. The reason for this lies in the existence of common points between some aspects of traditional Japanese residential architecture and the modes of expression of the core principles developed by the pioneers of modern architecture. This consequently makes the task of unveiling how the process of synthesis was carried out by Raymond all the more difficult but fascinating. For the time being, let us consider that these points were partly embodied in the five points of modern architecture, some

of them which were initiated by Frank Lloyd Wright, then completed and formulated by Le Corbusier in 1923. They include the free plan, the use of post and beam structure, and the free façade. Other common points include the particular care given to the treatment of the connection between the inside and the outside of the house or building, the standardization of structural and/or architectural elements, the rejection of ornamental and decorative elements, the simplification of form. However, although these similarities are undeniable, one must be cautious as to their origin, in the context of western culture and in the context of Japanese culture.

With this study, I hope to be able to give a better understanding of the common points and differences between the principles of Japanese traditional architecture and western modern architecture. This is necessary in order to grasp the process that underlies the birth and development of Japanese modern architecture.

3 The work of Antonin Raymond in Japan as subject of study

The tradition for residential architecture, and the common grounds of Japanese traditional architecture and Western modern architecture created a particularly fertile environment for the work of Antonin Raymond. The following paragraphs present a few characteristics that in my opinion make his work worthy of a research such as the one presented here.

3.1 Time spent time in Japan

One of a kind, Antonin Raymond, born Reimann (also spelled Rajman) in Bohemia on May 10, 1888, lived and practiced as an architect in Japan for 43 years (31^{rst} Dec. 1919-Jan. 1938; Aug. 1948- June1973). The Czech born architect is the only western modern architect (according to the definition of modern given above) who stayed in Japan for a length of time that would allow him to become involved with its people and culture in a significant way. It is thanks to his long stay that he was truly able to deal with the problematic of the common grounds of traditional Japanese architecture and western modern architecture, and to operate the necessary synthesis to the creation of a modern architecture suited to Japan. In contrast, only few of his European peers [19] actually visited the country, although many were those who acknowledged these common grounds, or were influenced by traditional Japanese architecture in their own work. Those who did were there only for relatively short periods of time[20]. Antonin Raymond consequently gained a rare insight into traditional building techniques, use of materials and on a wider scale into Japanese culture. Furthermore, his arrival in Japan in the middle of Taisho era conveniently enabled him

to be, one might say, "in the right place at the right time", when Japan's pursuit of modernization was slowly shifting from being mainly based on a state-driven "westernization" to gradually returning towards the roots of Japanese tradition and culture.[21] Like his Japanese peers, Raymond also benefited from the consequences of the great Kanto earthquake and the following period of reconstruction. This reconstruction did not only take place in the development of new forms and building techniques but also in new ways of thinking and design. As we will see further, it is also important to say that Japan gave Antonin Raymond the opportunity and time to develop qualities and ideas that he had long wished to express, but partly in vain, since his first contact with the architectural world while in Europe and America.

3.2 At the Crossing of influences

As far as the architect's cultural and architectural background is concerned, the early part of Antonin Raymond's life[22] constitutes one of the architect's main particularities. Raymond was born and spent the early years of his life in Bohemia. His early childhood was spent in the small industrial town of Kladno, situated on the outskirts of Prague. The town of Kladno where the architecture was a mix of Baroque and Renaissance and Gothic, which played an important part in the future architect's disposition to operate a synthesis of various traditions and culture in the creation of architecture. Later, his widowed father remarried and established his family in Prague (1905), where young Raymond integrated the Realka school and then the Czech Polytechnic Institute (1906). Raymond's memories of the early years, prior to the move to Prague, were deeply imprinted with the atmosphere of Bohemia's countryside, characterised by its lush nature and romantic landscapes.

In his autobiography, the architect remembers these early days mainly as those of "*the pleasures of coming into contact with the marvellous influences of nature*"[23] and says himself that these "*earthy things […] are of tremendous importance, forming the sub-soil of life*"[24] . In the present thesis we will look at Raymond's reminiscence of this early period of his life through his texts and discuss to what extent they might have contributed to his immediate connection with Japan.

In 1910, driven by a strong feeling of frustration and by personal problems that had aroused between him and his school and his family,[25] the young undergraduate fled a politically tensed Bohemia before completing his course. He travelled shortly in Europe and finally to Italy where he embarked on a ship bound for America in the fall of 1910. This in effect, meant leaving the cradle of European modern architecture on the eve of its outburst. But although Raymond left Europe at this crucial time, he had time to get a

glimpse and a feeling of the revolution that was about to begin through the early works of Czech cubist architects in Prague[26] and those of Frank Lloyd Wright, which were published in German architectural journals from 1910.[27] It was actually the American master's works that seduced the young student and convinced him that America was the place to be for the creation of a new architecture:

> "*Wright had restated the principles of building, he had overcome the cell, liberated the plan, made space flow, given buildings a human scale and blended them with nature, all in a romantic, sensual and original way which left us breathless. He was what we had been longing for, a real revolutionary*."[28]

Antonin Raymond's arrival in America marked the beginning of a second phase in his life, during which he would be exposed to a new kind of influence. After difficult beginnings as an immigrant in New York, Raymond obtained a position in Cass Gilbert's office where he worked as a draftsman on drawings for the Woolworth building, the highest building in the world at the time. Yet the young architect was soon overrun by the same feeling of frustration that had driven him to fled Europe:

> "*I was unhappy about the absurdities, banality and childlessness of our efforts in the architectural part of the design, which principally consisted of poring over books in the library in search of suitable motifs and precedents for the design of the building as a whole and in all its details. […] The complete absence of a youthful or critical attitude or any searching or hungering for solid spiritual or philosophical ideas in design seemed normal. […] My dream about Wrightish influence and subsequent freedom and creative design was proving to be nothing but a dream*."[29]

However, what Raymond did gain from this experience were the skills of a first class draftsman as well as knowledge on how to run an architectural office.

In 1914 (April), he returned to Europe, and stayed in Italy for a while where he devoted himself to painting. It was upon his return to America that he was introduced to Frank Lloyd Wright and subsequently worked at Taliesin, in 1916 (May-December). This third phase was dominated by the sole figure of his master, who transmitted his ideas of a modern architecture to the still young and very receptive architect. These ideas will be discussed further along the thesis, in regards to Antonin Raymond's way of thinking and way of design.

These three main phases of Raymond's early years indicate that he arrived in Japan with a background already characterised by a certain plurality of cultures and references. In reference to this particular aspect of the architect's life, it is the purpose of this thesis to stress the fact that this background played an important part in Antonin Raymond's capacity to operate a synthesis between Japanese and Western architecture.

3.3 A contribution to the definition of the basic principles of modern architecture

Since he was far away from his native Europe when the modern movement was taking form theoretically and physically, Antonin Raymond was not only compelled to, but also felt the strong need to clearly define what he considered to be the principles of a true modern architecture. From his point of view, this had to be done in the context he was given, that is the context of Japan. Raymond was challenged to clarify his position as an architect, on one hand being confronted to a different culture, and on the other hand wanting to assert his position in the main stream European modern movement. The stance he took was based on the synthesis between his own experience and what he had grasped regarding the conception of space, structure and philosophy of Japanese traditional architecture.

The process of synthesis was also the process through which post Meiji Japan was defining its new direction. After a period of merely absorbing western trends, a new generation of architects became conscious of the value of Japanese assets and worked towards the development of a modern architecture that would highlight these assets. These changes revolved around the transformation of Japanese society and moreover the way of life, as research in the realm of Japanese Social Studies have shown: "*Lifestyle becomes an object in itself, to be redesigned and articulated through a new range of concepts and objects. These allow for a fascinating series of syntheses between culturally defined habits…*" [30] Antonin Raymond therefore found himself in a relationship with Japan which provided him with the best conditions in which to define, develop and experiment through his projects what he called "*lasting values in design*".[31] These values are embodied in a series of principles enounced by Raymond in a series of writings; they are embodied in the principles of "*honesty"*, "*simplicity"*, "*economy"*, "*directness"* and "*naturalness"*. In the third chapter, we will look at the definition of these principles based on Raymond's writings, with a particular focus on the principle of "*simplicity"*. We will also discuss its manifestation in a selection of residential works, as part of an effort to determine the main characteristics of the architect's particular approach to this concept.

4 Aims of the thesis

4.1 Towards a definition of Antonin Raymond's "architectural identity"

In Japan, the name of Antonin Raymond is known by members of the architectural profession and those of the more general public who have interest in the history of modern architecture in Japan. While scholars and architects unanimously acknowledge

his role as one of the main actors of the development of Japanese modern architecture, little has in effect been written in Japan about Raymond's work from the perspective of his personal architectural development. One of the main reasons for this state of affairs could easily be explained by his position as a foreign architect in Japan, where he was always considered as an American architect, therefore as an outsider. We can also say that Raymond's various "stylistic" phases and his allegiance to Japanese traditional architecture not only in theory but in practice have made it impossible to designate him as the expatriate representative of any European or American architectural movement prevailing at the time. Equally, his position and development made it impossible to associate him with any Japanese group active in the field of modern architecture in Japan during the time of his stay. This is in my opinion the reason why until only recently, Raymond's work has only been approach in a very superficial manner in Japan.

The work undertaken with this thesis is therefore to explore the particularity and specificity of Antonin Raymond's work to see what characteristics of his designs may allow us to consider a given work as his own. Such a group of elements or system would be considered to embody his 'architectural identity'. It is purposely that I have chosen not to use the term "style", a question that is developed further along this chapter.

What has been said previously about the qualities of the private house will explain why I have chosen to concentrate on this category of Raymond's work. The works chosen for analysis were selected among those designed during the first period of Antonin Raymond's practice in Japan (1921-1938), because they reveal the formative aspect of his architectural identity. Furthermore, I have chosen to base my study on the residential works of Antonin Raymond, because of the level of intimacy that it involves between the architect and the built object. The private residence, with its reduced scale is in my opinion the best study material for the definition of an architect's architectural development.

4.2 A definition of "architectural identity"

The characteristics that reveal, identify and unify the work of an artist or a group are commonly referred to as "style". In his phenomenology of architecture, Christian Norberg Schulz's writes that the term 'style' "*designates a characteristic formal organization*"[32], further writing that in the field of linguistics "*style*" and "*formal language are synonymous*."[33] According to these definitions, "style" therefore stands out as a means of identifying formal characteristics, may these characteristics be

expressed in terms of physical "form", "aesthetic values" and/or in terms of how elements are assembled together. The conflict that opposed the pioneers of the modern movement and the architectural establishment which promoted "historical styles" in architecture provides a perfect illustration of the formal implications of the term "style". Thus the important point here is that the term "style" refers to formal characteristics.

In this thesis, we will also be looking at the characteristics that allow us to identify a work of architecture as Raymond's. To some extent, this therefore involves dealing with the formal question of style. However, the purpose of this study is to place emphasis on the process underlying these identifying characteristics rather than the formal result of the process itself. Now, if we ask the question: where do the identifying characteristics of an architect come from? We are faced with the necessity to explore the architect's architectural discourse and his approach to design, which are respectively referred to in this thesis as "way of thinking" and "way of design". These two elements are the main elements pertaining to the process of architectural creation in regards to the architect and are directly linked to the architect's personal identity.

For this reason, in the context of the present study, the ensemble of characteristics that identify Raymond as an architect are designated as his "architectural identity". "Architectural identity" encompasses more than the formal characteristics of the final architectural object as a means of identification of the architect's originality. It also encompasses the "creative process" through which the architectural object emerges, and therefore the characteristics of this process for a specific architect. In order to be examined and described, "architectural identity" can be considered as a "system" in which elements are considered, as well as the relationship between these elements. The architect's "architectural identity" results from the combination of his way of thinking, his way of design and the relationship between the two.

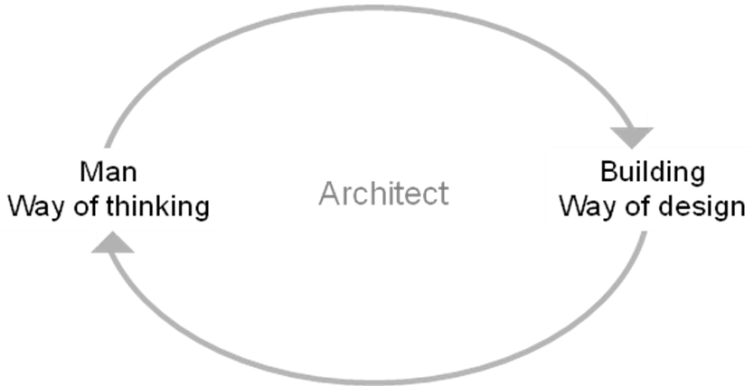

Fig. 1 Components of "architectural identity"

4.3 Aim of the research on an academic level

On the level of academic research, the aim of this thesis is to provide a study tool for researchers, scholars and anyone interested in deepening their knowledge of the realm of architecture. Not only for those interested directly in the work of Antonin Raymond in Japan, but for anyone with an interest in the formation and development of modern architecture, specifically in Japan, and on a wider scale, in the questions relating to the spreading and adaptation of the ideas and forms developed by European and American pioneers of modern architecture, in other parts of the globe. First of all, I hope this work will be considered useful for its analytical aspect, may the ideas expressed in it be discussed in the future. Secondly, I hope it will be appreciated for the corpus of first-hand documents that I have compiled into a database (see Annex), which constitute a valuable source of information and data. A restricted number of photographs and drawings have been published, but there is to this day no existing book or database compiling the architectural drawings of Antonin Raymond.

4.4 Raymond's work in the development of Japanese residential architecture

The widespread and common use of the expression "the Japanese house" (although scientifically erroneous, for there are multiple examples of Japanese houses) presupposes the existence of set concepts, considered to embody the intrinsic qualities of the 'private house' in Japan. However, in effect, there is still a lot to explore and discuss regarding the evolution process that separates Japanese traditional houses and there contemporary counterparts.

The residential designs of Antonin Raymond provide a very precious corpus of examples for the illustration of this evolution process, within the scope of modern architecture. It is not to say that his works mirror the development of Japanese residential architecture as a whole, since his designs always remained the privilege of a very specific and reduced section of society, composed of both foreign and Japanese clients. The interesting aspect of his work can also be attributed to the timing of his arrival in Japan, and to the fact that as a western architect, he was confronted with the challenge of grasping the essence of Japanese traditional residential architecture. If we accept the idea that only by acquiring such an understanding Raymond could have been able to operate some form of synthesis between Western and Japanese architecture, then we will have to look for elements that testify for this understanding. This question will particularly be examined in the third chapter, when we explore the architect's way of thinking.

5 Outline of the thesis and methodology

The core of this dissertation is not organised along the chronological axis of Antonin Raymond's life and career, as in a monograph. Rather, it is organised in four chapters, which explore some of the components of the architect's 'architectural identity'.

Chapter 2 deals with the background of Antonin Raymond. It presents the context in which his architectural sensitivity developed and stresses the presence of Nature in his environment and thinking from an early stage of his life. The purpose of this chapter is to understand how Raymond's early years prepared him on a sensitive and intellectual level for his encounter with Japan, and his consequent allegiance to the principles of traditional Japanese architecture.

Chapter 3 provides an insight into the architect's "way of thinking". This chapter is based on the study of a corpus of essays written by Antonin Raymond between 1935 and 1964. This chapter first discusses the didactic nature of Raymond's architectural writings, based on the methodological approach of "Architecturology". As a particular example, the author gives the definition of "the Architect" in Antonin Raymond's way of thinking.

Chapter 4 provides an insight into the architect's "way of design" (設計方法). Raymond's way of design consists in the combination of Western and Japanese architecture through the complex process of synthesis. The chapter emphasizes the dialectic relationship between Western forms and Japanese way of design and construction, which is characteristic of Raymond's way of design. As particular examples, this chapter presents a study on the use of tatami in Raymond's residential designs and a detailed analysis of Karuizawa house.

Chapter 5 focuses on the relationship between the architect's way of thinking and way of design. For this purpose, this chapter explores the apparent contradiction found in the fact that Raymond's way of design is based on the "complex" process (synthesis) and his us of "simplicity" as main principle in his theory of architecture. The chapter therefore discusses the level of "coherence" in the relationship between Raymond's way of thinking and way of design.

5.1 Chapter 2: "Impressions" of space

In the second chapter, I have compiled information and discussed topics that constitute a base for the analysis of Raymond's way of thinking and way of design carried out in the third and fourth chapters. There are two degrees in the meaning of the expression "impressions" of space. It should be understood both as the way in which

Raymond's architectural environment impressed itself upon his mind, and also as the way the young Raymond perceived architecture through the sceneries of his childhood. In perspective of the following chapters, the purpose of this first chapter is to reveal and clarify the reasons why the architect felt so strongly connected to Japan from the very moment he set foot in Yokohama, on the eve of 1920.

In this perspective, we must look at Antonin Raymond's intellectual and cultural background. From his childhood to his arrival in Japan, Raymond was exposed to various cultures and environments, in Europe an America. So we will look at his young years with the purpose to establish an intellectual and cultural portrait of the architect at the time of his arrival in Japan. It was in 1910 that Raymond immigrated to the United States, the same year that modern architecture took an unprecedented leap in the course of its evolution, with the formulation of the new conception of space by painters and sculptors. However, the early years Raymond had spent in Prague, where Czech cubism had started to develop, played an important role in the formation of his architectural sensitivity and ideal.

This chapter also deals with the implications of the concept of 'modernity'. If 'modern architecture' was created to fit a modern society in Europe, what did it echo in Japanese society that made its importation and adaptation possible? In other words, what did being 'modern' mean and imply in 1920s Japan? Since this question is potentially very vast, the discussion is limited to the field of residential architecture as much as possible. Ultimately, this chapter will show in what manner Japan contributed to the launch of Raymond's career and what the Czech born architect was able to provide in regards to the needs of its society.

5.2 Chapter 3: An insight into the architect's way of thinking

This chapter relates to the architect's way of thinking. The emphasis is placed on a series of principles advocated by Antonin Raymond as the basic principles of architecture. These principles testify for Raymond's need to articulate his own theory of architecture, like his peer in Europe and America, mainly Auguste Perret, Le Corbusier and Frank Lloyd Wright. As a particular example, the chapter includes a definition of 'the Architect' in Antonin Raymond's way of thinking. As a result, we are able to understand on what theoretical grounds the architect based his design.

This section of the chapter also provides us with the means to understand where Antonin Raymond stood on the local and international scene, as far as architectural discourse was concerned. In other words, at the level of architectural discourse, to what extend he identified with or distinguished himself from major modern architects of the

time in regards to the problematic they were facing and the ideal they were pursuing. This section also deals with the architect's intentions. We may learn about his stated intention from the content of his writings and we may learn about the nature of his discourse from the style of these writings.

For the analytical part of the study, I have mainly relied on the lessons of architecturology, which provide valuable tools for an analysis of the architect's writings, especially in regards to the understanding of the architect's intentions. These tools are mainly provided in the book by Philippe Boudon, *Introduction à l'architecturologie*. The analysis of Antonin Raymond's way of thinking is now necessary step for the definition of his "architectural identity".

5.3 Chapter 4: An insight into the architect's way of design

This study of Antonin Raymond's way of design was carried out on a selection of residential works designed by Raymond in Japan between 1921 and 1938. The material used for the purpose of the analysis is a series of architectural drawings obtained first hand at Antonin Raymond's architectural design office in Tokyo. As a practical example, we will look at the way Raymond dealt with the use of tatami in residential pre-war designs, since tatami is the most important symbol of Japanese space even in western style houses.

The fourth chapter also presents a thorough architectural analysis of Karuizawa house, designed by Antonin Raymond for himself and his family in 1933. This project is considered as representative of Raymond's architectural identity in the prewar stage of his architectural development. The focus elements of the architectural analysis are 'space', 'form', 'building techniques', 'materials' and the relationship to the building's environment as a mirror of its relationship with Nature. This relationship is not limited to the relationship between 'interior' and 'exterior', but can be also studied in the choice and use of materials.

The approach to the architectural analysis bare two aspects. On one hand it is conducted in regards to the architect's way of thinking discussed in the second chapter. On the other hand, it buildings are examined from the point of view of the architect, that is with the purpose to clarify the architect's way of design based on the practical observation of the source documents.

In this section, I will also refer to the works of architects who played an important part in the formation of Antonin Raymond's architectural identity. These are mainly Auguste Perret, Le Corbusier and Frank Lloyd Wright. This will certainly contribute to the formulating the architectural identity of the Czech born architect in regards to his

approach of a synthesis of western modern architecture and Japan's tradition for residential architecture. But it will also contribute to the clarification of a specific point of view and approach towards the creation of a specifically Japanese modern architecture, from the point of view of a western architect practicing in Japan.

The main theoretical tool used for this purpose will be that of phenomenology of architecture, such as formulated by Christian Norberg Schulz. A philosophical foundation to this approach is naturally to be found in Martin Heidegger's philosophical thought on the relation between 'man', 'space' and 'building'. The French philosopher Gaston Bachelard also provides a valuable insight into a phenomenological approach of space, mainly in his book *The poetics of space*. Besides the phenomenological approach, the discussion will necessarily be supported by the works of several eminent architectural historians who have written about modern architecture. The historical point of view however, will only be adopted when necessary, as a means to replace the projects in their context and for the sake of chronological clarity, which is to establish the connection between them and with other works of architecture.

5.4 Chapter 5: A study of the level of coherence in the relationship between Antonin Raymond's way of thinking and way of design

The fifth chapter presents a study on the nature of the relationship between Raymond's "way of thinking" and "way of design". Raymond's "way of thinking" is embodied in his writings, and more particularly in a series of principles that was listed in his essays between 1935 and 1964. These principles are: "simplicity", "directness", "economy", "naturalness", "functionality" and "honesty", which convey an idea of "simplicity". In fact, and a survey of Raymond's essays shows that "simplicity" is the principle most often mentioned.

If we consider that Raymond's principles are representative of his "way of thinking", we are then confronted with an apparent paradox in which the design of a building designed through the complex process of "synthesis" is based on the concept of "simplicity". In other words, how can a building appear simple when it is the product of a complex process?

The fifth chapter therefore explores this apparent paradox. Elements of an answer can be provided if we understand the nature of the relationship between Raymond's "way of thinking" and "way of design". In other words, we need to determine the "level of coherence" between Raymond's use of "simplicity" as a principle, and the "complexity" of his design process.

This chapter is organised in three parts: first we will look at the definition of

"simplicity" from Antonin Raymond's point of view. Next, we will explore the reasons why Raymond chose "simplicity" as one of the main principles for his architectural ethics. And last and as a particular example, we will look at the way Raymond translated the idea of simplicity in his design for Karuizawa house.

5.5 Regarding the source documents

The first problem facing anyone who wishes to study the work of Antonin Raymond is the scarcity of documents directly related to his architectural work. Antonin Raymond's name is commonly mentioned in architectural history books, besides those of Japanese architects who played an important part in the awakening and development of modern Japanese architecture, such as Junzo Sakakura (坂倉準三), Kiyonori Kikutake (菊竹清訓), Sutemi Horiguchi (堀口捨己), not to mention Kunio Maekawa (前川国男) and Junzo Yoshimura (吉村順三), both of whom worked in Raymond's office. Any works mentioned are often post-war examples of the architect's experiments and achievement in the field of concrete architecture. Little is therefore in effect known about his pre-war work, particularly in the field of residential architecture. Furthermore, his work has not yet been the subject of any book or PhD dissertation in Japan.

To this day the main academic work dealing with Antonin Raymond's work is the PhD dissertation entitled *Building the Contemporary House: Modernity, Regionalism and the Ideal of Japan in Antonin Raymond's Residential Architecture*[34], defended at the University of Virginia in 1997. This very exhaustive and detailed work is so far the most valuable source of information on the life and career of Antonin Raymond in Japan and America. It is valuable for the nature of the information itself and also because it is probably the only document, with Antonin Raymond's own autobiography, which compiles a large amount of details on the architect's life and activity and influences. This is particularly useful if we consider the fact that the Czech born architect lived in three different parts of the world and practiced both in Japan and American for more than 50 years.

The nature of this work, added to my personal aim as to the study of Antonin Raymond's work have led me to adopt the point of view that has guided my approach for the present dissertation. Naturally, the time span and amount of information dealt with in the above mentioned dissertation has impeded on the depth of analysis of the architect's works from a purely architectural point of view. The second gap left open is related to the actual 'raw material' on which any detailed Analysis of Raymond's work should be based. To this day, no compilation of Antonin Raymond's essays or architectural drawings has been created, either in the form of a book or in the form of a

database. Some of the architects' essays were however translated in Japanese and published in 1967.[35]

The introduction to this dissertation has, I think, clearly showed my intentions in regards to the first gap mentioned above. I also hope to be able to contribute to filling the second gap by making available to researchers a selection of the various documents that I collected during the course of my research. As far as documents directly related to Antonin Raymond, I have collected essays, original photographs and architectural drawings. The data base however also gives information on the architectural publications in which projects appear and references of short essays dealing with the work of the architect. All the documents compiled in the database were collected first hand in Japan, mainly from Antonin Raymond's former studio in Karuizawa and from the architectural design office which still bears his name in Tokyo.

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[1] G. Bachelard, *The Poetics of Space*, Beacon Press, 1994, p. 4.
[2] *ibid*.
[3] Christian Norberg-Schulz has been discussing the phenomenology of architecture since the 1970's. His main works in regards to this subject are:, *Intentions in architecture* (1965), *Existence, Space and Architecture* (1971), *Meaning in Western Architecture* (1974), *Genius Loci* (1980), *New World Architecture* (1988), *Principles of Modern Architecture* (2000), *Architecture: Presence, Language, Place* (2000).
[4] F. L. Wright, The Natural House, New York: Meridian, 1954, p. 22.
[5] T. Riley, "The Un-Private House", Architecture + Urbanism, June 1999, pp. 3-37
[6] C. Norberg-Schulz, *Principles of Modern Architecture*, p. 49.
[7] T. Isoand N. Aono, "Architecture Historian Fujimori's Key Terms on Japanese Modernist Houses", *Casa Brutus*, 2004, p. 142.
[8] For details about Frank Lloyd Wright's relationship with Japanese art, see two reference books: K. Nute, *Frank Lloyd Wright and Japan: The role of Japanese art and architecture in the work of Frank Lloyd Wright*, London, Tokyo: Chapman & Hall, 1993; Meech Julia, *Frank Lloyd Wright and the art of Japan: the architect's other passion*, New York: Japan Society, 2001.
[9] F. L. Wright, *The Natural House*, New York: Meridian, 1954, p. 17.
[10] E. S. Morse, *Japanese Homes and Their Surroundings*, Harper & Bros, 1885.
[11] R. A. Cram, *Impressions of Japanese Architecture and the Allied Arts*, 1rst ed. 1905, 2d ed. The Japan Society, 1930.
[12] B. Taut, *Fundamentals of Japanese Architecture*, Kokusai Bunka Shinkokai , 1936, 36 p.; *Houses and People of Japan*, Sanseido, 1937.
[13] See data information in appendix.
[14] O. Wagner, *Modern Architecture*: *a Guidebook for his Students to this Field of Art*, tr. by Harry Francis Mallgrave, Santa Monica, CA, Getty Center for the History of Art and the Humanities, 1988.
[15] Translated by the author from Le Corbusier, *Vers une Architecture*, (1rst edition: 1923, 2d edition: 1924) Paris: Flammarion.
[16] I use the term 'kind' rather than 'type', which presupposes the definition of set common characteristics, mainly related to a functional nature, with which we are not

concerned at this stage of the discussion.

[17] W. J. R. Curtis, *Modern Architecture Since 1900*, London: Phaidon, 1996, p. 11.

[18] *ibid*.

[19] These architects do not include earlier foreign architects who came to Japan in the Meiji period, such as T. J. Waters (arrived in 1863); Josiah Conder (1877- 1920 †); A.C. De Boinville ; R. A. Cram (arrived in 1898); W. M. Vories (Japan: 1905-1967 †) or R. A. Cram (arrived in 1898).

[20] Apart from Frank Lloyd Wright, who visited Japan on seven occasions between 1905 and 1922, other early western modern architects who visited Japan were Bruno Taut who stayed in the country from 1933 to 1936, Walter Gropius from May to August 1954 and Le Corbusier, who visited Japan once in 1955 regarding his the project for the museum of modern art in Ueno park in Tokyo.

[21] For a discussion on the various stages of Japan's westernization, see Imitation and Innovation: the transfer of Western organization patterns to Meiji Japan, D. Eleonor Westney Cambridge Mass.: Harvard Univ. Press, 1987; Being Modern in Japan, Culture and Society from the 1910s to the 1930s, Elise K. Tipton and John Clark (ed.), Honolulu, Hawai: Univ. of Hawai Press, 2000.

[22] The main source of information on Antonin Raymond's life is: A. Raymond, *An Autobiography*, Charles E. Tuttle, 1973.

[23] A. Raymond, *An Autobiography*, Rutland, Vt.: Charles E. Tuttle, 1973, p. 11.

[24] *ibid*., p. 12.

[25] Raymond was appointed treasurer of his architectural student's association. But he stole money from the club, only to repay it years later.

[26] For a detailed account of the Czech cubists activity and their influence on Antonin Raymond, see C. Vendredi-Auzanneau, "Antonin Raymond's intellectual background: A focus on the Czech cubist and modernist architecture", *Journal of Architectural Planning*, AIJ No 572, Oct. 2003.

[27] Antonin Raymond testifies in his Autobiography that it was in the German publications edited by Wasmuth in Berlin that he first laid his eyes on Wright's work, around 1908 (An Autobiography, p. 24). However, an earlier account of Wright's work was published in the April issue of Volné Směry by the architect Jan Kotěra, a leading figure of the avant-garde in Prague and a disciple of Otto Wagner (ref.: Helfrich Kurt G. F., Whitaker William (ed.) *Crafting a Modern World: The Architecture and Design of Antonin and Noémie Raymond*, New York: Princeton Architectural Press, 2006.

[28] *ibid.*, p. 24.

[29] A. Raymond, An Autobiography, Rutland, Vt.: Charles E. Tuttle, 1973, pp. 28-29.

[30] E. K. Tipton and J. Clark, *Being Modern in Japan – Culture and Society from the 1910s to the 1930s*, University of Hawaii Press, 2000, p. 10.

[31] *ibid*.

[32] C. Norberg-Schulz, *Intentions in Architecture*, M. I. T. Press, 1965, p. 104.

[33] *ibid.*

[34] K. G. F. Helfrich, *Building the Contemporary House: Modernity, Regionalism and the Ideal of Japan in Antonin Raymond's Residential Architecture*, University of Virginia, 1997.

[35] A. Raymond, 私と日本建築 (Watashi to nihon kennhiku), 鹿島研究所 (Kajima kenkyū-sho), 1967.

CHAPTER 2
'IMPRESSIONS' OF SPACE

Introduction

This chapter presents the context in which Antonin Raymond's architectural sensitivity developed. The aim of this chapter is to focus particularly on the elements that ought to be considered to have had a significant importance in Raymond's later involvement and sense of connection with Japan. This implies that before we consider the architect, we consider the man, in the environment and atmosphere that surrounded his early years.

The chapter is divided in four parts, each of them relating to a particular topic, and considered as a necessary step, and containing relevant information for the understanding of Raymond's way of thinking and way of design discussed in the third and fourth chapters. The elements discussed here are the presence of Nature in young Raymond's environment, his architectural environment, the awakening of his architectural identity, and finally the context that was prevalent in his first contact with modern architecture towards 1910. These elements have been chosen in regards to the approach of Antonin Raymond's design adopted in this specific thesis. Therefore it does not claim to cover all fields and departments of Antonin Raymond's life prior to his debuts as an independent architect in Japan, nor are the topics necessarily discussed in their chronological order. But the topics that have been chosen are considered as crucial in the understanding of the manner in which Raymond's intelligence and sensitivity were "impressed" or marked, in terms of sense of place and architecture. This is of crucial importance in order to understand the future choices made by Antonin Raymond as an architect.

The discussion starts with the early years spent in Bohemia, which elapsed between Raymond's birth (May 10, 1888) and his departure for the United-Sates via Italy (January 1910). Childhood was spent between the small industrial town of Kladno, outside Prague, and the farmhouse of Raymond's maternal grandparents' in Řenčov, a countryside village. This period is characterized by the young boy's discovery of the values and beauty of nature and the awakening of his artistic sensitivity and architectural consciousness. In 1902, the family moved to Prague. This marked the beginning of a period during which Raymond would gradually develop a sense of frustration and dissatisfaction that triggered his interest in modern architecture. It is there that he began his architectural studies which were interrupted before graduation[1]

by his departure for Italy and the subsequent voyage to the United States, where he was to meet Frank Lloyd Wright, the architect that marked Raymond's way of thinking like no other.

The approach to Raymond's architectural and natural environment in the perspective of considering their impact in his way of thinking and his way of design is based on the point of view of phenomenology, particularly that of the French philosopher Gaston Bachelard, who uses the expression "initial shell" in regards to the private house. In regards to the natural and architectural environment and their quality and impact upon the future architect, the approach adopted in this chapter follows the point of view of Christian Norberg-Schulz, as discussed in his phenomenology of architecture.

1 Early years in Bohemia

1.1 The initial shell: A townhouse

The first architectural environment of Antonin Raymond was that of the small industrial town of Kladno, his birth town. It is there that the young boy's sensitive eye became aware of the built environment and the impact that it bears upon its occupants. This sensitivity was not limited to the perception of architectural styles but also included a conscious on the manner in which architecture did or did not suit the lives of its inhabitants. Raymond later realized that he had been from an early age conscious of the need for architecture to reflect the lives and needs of its users, one of the most important elements in the birth and development of modern architecture.

Fig. 2 Antonin Raymond's house on Kladno square (2005)

In the following abstract, Raymond remembers the atmosphere that surrounded his home in Kladno :

> *"During the first ten years of my childhood, I can remember only the most simple fare at home. If something of the bourgeois taste of the times impressed itself upon our daily lives, it could be seen only in the dull furnishing and interiors of our house. But life was not so complacent in Kladno that its medieval atmosphere did not respond to technical innovations from the United States in the form of electric street-lighting and the telephone."*[2] *[...] "The house in Kladno as an ugly two-story dwelling located on a corner facing the town square. [...] The downstairs was occupied by two shops"*[3] *[...] "To enter our living quarters, we had to go through a gateway that looked more like a garage, or through one of the shops. [...] A bourgeois home of course, was not complete without a salon – that is, a room with windows that were hardly ever opened. They were opened only on special occasions when a guest would come; the salon was filled with what was regarded as very choice, high-class furniture, and which today is associated with everything bad in the Victorian period and manner. This elegant room was the place where guests were received, and from which we could look out upon the street below through corner windows framed by velour draperies. Those drapes fascinated me as a child because of the numerous soft, cotton balls that hung from the fringe. The salon was also made resplendent by a prismatic luster that hung from the ceiling. Lending a little atmosphere of gentility and culture were some shelves of books, whose titles I no longer remember."*[4] (A. R. An Autobiography)

From these lines, we get a strong feeling of the fact that towards the birth of new ideas that gave way to modern architecture, people and architecture became somewhat disconnected. Raymond's words reflect very clearly the fact that the situation had come to the point where architecture was in effect imposing a way of life on people rather than being a mirror or their way of life.

The distinction established between the formal quarters and those used for everyday life meant that some areas of the average Bourgeois home were left empty and used only of the scarce formal occasions. Raymond had nevertheless mixed feelings towards the bourgeois atmosphere of his home, reminiscing at the same time about the dullness of it furniture but also about a certain "elegance" and "gentility". These mixed feelings, rather than pointing out a contradiction such as often found in Raymond's writings, give us a hint about his feelings towards "tradition". That is to say, although Raymond became conscious of the need for a change, he still acknowledged the need

and the value of tradition. These were qualities that he would endeavor to preserve, only under different circumstances, and through different modes of expression.

Fig. 3 Kladno square: the church, the town hall (2005)

Fig. 4 Kladno square: the town hall, and the baroque sculpture in the forefront (2005)

1.2 The initial shell: A farmhouse

In terms of the relation between architecture, considered here as man made environment, and nature, one of the places that was most influential and played a crucial role in Raymond's future way of thinking was the farmhouse of his maternal grandparents. There, he became acquainted with rural and farm life, and consequently developed a strong feeling of the presence and role of nature in man's life and activities. This farmhouse was situated in Řenčov. A survey of Raymond's autobiography provides many examples of the vivid memory this place left in the young boy's memory:

"*It was a typical farmhouse, such as was in general use in feudal times and up to the Second World War. The entrance was typical of Bohemian and many other*

European farmhouses and not unlike Japanese ones.

One crossed over a bridge; a ditch; then through a high covered gateway one entered the courtyard flanked on all sides by buildings. The grandparents, who at that time were already retired, lived on the left side of the covered passage, in one room. My uncle's family lived on the other side of the passage. The main entrance was a kind of annex to the kitchen, and it also was a work space.

In the kitchen there was a Dutch oven for baking bread, and grandmother churned the butter with a wooden beater, standing before the wooden churn with her hands in white cotton gloves. The very large loaves of bread, brown and crisp on one side and white of the other, could be smelled at the other end of the village as they baked in the stone oven, heated to the right temperature by selected hardwood. The kitchen was a warm and cheerful place and always very busy.

[…]

The laundry was done every Monday. Everybody took a bath in the laundry tub on Saturday. The hot water for the bath was heated in the same cast iron cauldrons used for the laundry. The male and female help worked in the fields that were widely scattered, as everywhere in Europe, because of legacies and barter practiced over the flow of centuries. Next to the living quarters were the stables. […] The stables also served as the sleeping quarters for men. They slept on racks hung from the ceiling. My greatest pleasure was to be allowed to spend a night in the stable, dreaming in the sweet smell of the animals and the sound of cows chewing their cuds.

Next to the stables there was a manure pit, in a corner of which was the privy. It was a long walk from the house to the outhouse on cold nights. […]

Further on were the vegetable and flower gardens, beyond which was the barn, the hay stack and the grain storage. Under the barn was the ice cellar, where the ice from the ponds was for summer use. On the western side of the rectangular courtyard was a wagon shed and next to it a slaughterhouse. In the middle of the courtyard stood a pigeon coop on a high pole. Beyond the barn a large orchard kept us in apples, pears and plums. Stone walls surrounded the whole of the compound."[5]

These lines extracted from the architect's autobiography provide us with an idea of the atmosphere that surrounded Antonin Raymond as a child. First, we may say that the general atmosphere conveyed by the architect's words is one suffused with modesty, sense of earthen values, and sense of the importance of nature, may it be in the environment or in the way of life. These values are important if we are to understand the

foundations of Raymond's relationship with Frank Lloyd Wright and at a later stage with Japan.

The importance of early years in owns future development is stated by Raymond himself in his autobiography:

> *"It is good to think and write about these earthy things, for they are of tremendous importance, forming the poetic sub-soil of life."*[6]

The barn in particular, as a symbol of an agrarian way of life and an architectural type, would be used by Raymond as a reference in later years. It would particularly find echo in the design philosophy and way of life pursued by his future master Frank Lloyd Wright at Taliesin. Wright had himself spent time on a farm in his early years, and later on developed a philosophy of design based on the idea that Nature should be considered as the Teacher for all things.

Raymond's aspiration to country life, and consideration for the barn, with its functional and simple qualities, would also find echo in the rural culture of Japan. This culture is embodied in *minka* 民家, the traditional Japanese farmhouse, from which Raymond drew some of the most important components of his way of design, as we will see in the fourth chapter, with the architectural analysis of Raymond's summer house in Karuizawa.

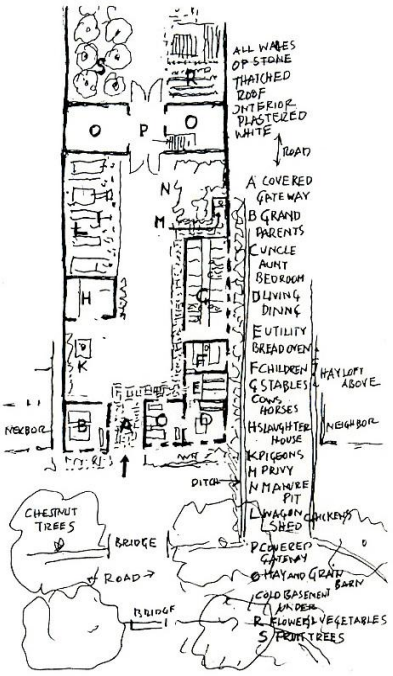

Fig. 5 Plan of Antonin Raymond's farmhouse in Řenčov, drawn by Raymond

1.3 Prague: the value of tradition and a glimpse of the future

In 1905, two years after the premature death of Raymond's mother, the family moved to Prague. For young Raymond, who was at a particularly important stage of his intellectual development, these were times of mixed feelings. On one hand, they were feelings of wonder at the sight of Prague's architectural heritage, which he discovered during long walks across the medieval city:

> *"To go to school I passed a small plaza where there was a very beautiful fourteenth-century stone well with a wrought-iron grille, and then the famous clock on the City Hall and the twin towers of the Týn Cathedral with its ancient side entrance of half-decayed sandstone sculpture on a narrow street. This daily walk past those wonders and past the Gothic, Renaissance and Baroque houses and their covered sidewalks exerted a powerful influence over me for the rest of my life."* [7] (An Autobiography)

Raymond's perception of Prague's architectural qualities nourished an idea that tradition, as a medium of continuity with the past, definitely had something to offer in terms of value and truth, and should not be cast away, but rather reconsidered in a new perspective and used to create the foundation to a new way of thinking, in architecture and arts.

On the other hand, Prague also nourished what would later be clearly articulated as the conscious necessity for an architecture which suited peoples lives in their time, and a profound rejection of an architecture based on the imitation of old style, and architecture of "borrowed forms" but lacking "valid tradition".[8] Raymond describes the paradox of the situation in Prague in the following words:

> *"My generation was brought up in the most appalling setting the world had ever known, the world of imitation marble, of three-tiered fringed curtains, of respectable drabness and false luxury resulting from the discoveries of industry and the machine. Yet just outside our door stood the wonders of the Romanesque, Gothic, Renaissance, baroque and other architectures."* [9] (A. R., An Autobiography).

The need to create a new living environment, expressed in architecture and art, was enhanced by the harsh living conditions of the Raymond family, cramped up in a medieval like flat rented by Raymond in the Jewish district of Prague.

> *"At first we lived in an apartment opposite the Realka; then we moved to a very ancient building, with a small open courtyard overhung with balconies featuring plain iron railings, and toilets, each serving more than one apartment. It was very romantic and also very smelly. Six children and their father were cramped into*

three rooms, uncomfortably hot and cold according to the season; […][10]

In Prague, Raymond's architectural education continued, at the Czech Polytechnic Institute on one hand and through his endless explorations of the city on the other. His feelings would soon develop into opinions for which the scene of the Czech avant-garde would soon offer fertile ground to grow upon. in the activities and ideas of the "Secession" movement in Vienna and its leading figure Otto Wagner, which were relayed by Jan Kotera in Prague. In any case Raymond was deeply marked by the city of Prague which to his own confession "*has made itself felt throughout my life and in my philosophy of design."*[11]

2 The presence of Nature

2.1 In Prague

After the premature death of Raymond's mother and the subsequent family's move to Prague, times became difficult for the family. As we have seen, while he admired the architectural richness of Prague, Raymond also resented the cultivation of a fake tradition that gave form to "imitation" architecture.

Just like the young Raymond enjoyed the contact with nature through the country life of his grandparents' farm, Raymond sought refuge in the nature surrounding Prague, which offered plenty of space and a beautiful views over the city :

> "*The river quais and the parks on the hills, all with wonderful views, and the ancient lawns and trees provided splendid places for students both to study and to make love. The river itself offered ice skating and ice hockey on the island in winter and swimming and boating in summer.*"[12] (A. R. An Autobiography)

Fig. 6 Panoramic view of Prague from the park (2005)

Fig. 7 The park (2005)

While education at the Realka in Kladno had been a progressive one, where emphasis was placed on expression through arts and fraternal values through sports, education at the technical school was a very traditional one. The curriculum was organized around Technical subjects and drawing lessons dedicated to the copying of antique architectural styles. The lack of simulation brought by a highly academic and conservative system drove the young Raymond to seek refuge in the contact with nature which he had learned to know from a very early stage in his life :

> *"Later, for some reason that I have forgotten, we moved to a suburb called Vinohrady, which was nearer to the Technical University on Karl's Square. The late nineteenth century buildings of this school were ugly and gloomy. […] My memories are note pleasant of the time spent there on innumerable drawings in India ink in the Beaux Arts manner; on copies of classic orders, Greek, Roman, etc. […] I worked hard with the principle aim of passing the exams and getting out of school, towards dimly seen horizons of my imagination and freer activity. In my rare spare moments, I liberated my soul by sketching landscapes from nature."*[13]
> (A. R. An Autobiography)

Fig: 8 The park. (2005)

2.2 In America with Frank Lloyd Wright Lloyd Wright

Antonin and his wife Noémi Raymond arrived at Taliesin, Wisconsin, in May 1916, and they would live and work there until December. Like many encounters Raymond made during the course of his life, it was thanks to a connection of Noémi's that the couple had the opportunity to work with Frank Lloyd Wright. In 1915, the couple discovered that St. Clair Breckons, an intimate friend of Noémi's was acquainted with Miriam Noel, who became Frank Lloyd Wright's companion and lived at Taliesin.

Before going to Taliesin Noémi and Raymond had spent time in New York, where they rented a small studio. Raymond had been working at the big firm of Cass Gilbert, where much to his frustration, he was assigned to the drawing of Gothic style details for the Woolworth building, at the time the highest building in the world. At the same period Raymond started to dedicate more time to painting, which like the contact with nature in Prague, acted as a refuge and gave him the possibility to express his creativity. In 1914, he traveled to Europe where in Italy, he was able to paint like never before. However, by 1915 Raymond had become deeply disappointed with the architectural scene in America, which he once had dreamed to be cradle of "new architecture".

However, the couple's arrival at Taliesin marked a new turn in Raymond's life, his architectural and intellectual development. After the medieval like living conditions of Prague, and days of hardship in the big city of New York, Taliesin appeared like heaven on earth to a Raymond craving for beauty and creativity expressed in a way never seen before. The building itself, built in stone walls that had the "*beauty of those medieval times*", on one hand triggered Raymond's his European background, the beauties of Prague, but still presented completely new qualities to him, never experienced before.

> *"We had never been in any building other than a traditional classic or an imitation of something-or-other. For several days we walked as in a dream. The inventiveness displayed, the original planning, the grace of proportions, the manner in which the landscape and architecture blended instead of fighting, held us entranced."*[14] (A. R., An Autobiograhy)

Raymond recalls that Taliesin was not "a modest affair". The property included the main residence, but also a studio with living quarters for members of staff and a farm building. Raymond recalls this "farm" with in a slightly ironical way, for as he recalls, no farming was really done by Wright himself. But more than any concrete results, it was Wright's aspirations and perpetual experimentations that deeply impressed Raymond and left deep mark in his mind.

Taliesin acted as a time bridge for Raymond, creating a connection between the context of his early years in Bohemia and his aspirations for the future, embodied in a new form of expression in art an architecture. All were brought together in the form of Taliesin's agrarian ideal, an ideal that Raymond would pursue himself in later years, in his property of New hope, Pennsylvania, and in his Azabu home and studio, in Tokyo.

In the context of Taliesin, Nature was again at the center of life, and Raymond recalls the surroundings of the property as follows:

> *"We were generously allowed the free of the establishment and the use of horses. Roaming through the Wisconsin countryside on foot or on horseback was magnificent in those days. The roads were all dust or mud or nonexistent. Motor cars were few, and horses shied at their sight. All our leisure time was spent in discovering the rolling hills, fertile valleys and the bluff overlooking the Wisconsin River. There were flocks of geese, snakes, and wild flowers quite new to us."*[15] (A. R. An Autobiography)

3 The awakening of Antonin Raymond's artistic sensitivity

3.1 Early childhood: nature and art

As we have seen in the above section, it was at his grandparents' farm that Raymond first became conscious of the relationship between man and nature. This place played a crucial part not only in his understanding of such a relationship but also in the

development of his artistic sense:

> *"…my experience at Řenčov are associated with all the pleasures of coming into contact with the marvelous influences of nature. Řenčov fed the artist in me with the sights and the sounds of an exceptionally beautiful life on the farm…"*[16] (A. R. An Autobiography).

But in was under the influence of one particular person that Raymond learned how to use and translate what he could feel and see into the creative qualities that would lead him to become an artist and an architect. This person was Raymond's elementary school's teacher Mr. Soukup:

> *"Soukup was probably the chief reasons that I became an architect, for under his guidance I was awakened to the powers or art. […] Our teacher was an artist. […] of the greatest importance to me was his powerful and inspiring way in teaching art. He was extremely romantic in nature, and deeply patriotic. […] He taught us how to look at nature, so that from my fifth year […] I was drawing […] and painting from nature."*[17] (A. R. An Autobiography).

It was thanks to the influence of teacher Soukup that Raymond knew from an early stage that he would become an architect. As he recalls, he did not at the time precisely knew what being an architect involved but he knew that it had to do with "making houses":

> *"I built houses, in fact whole villages, of paper and paste, coloured them with water-colours and put coloured gelatine into the windows; at night I put tiny candles inside the houses and sat for hours admiring the scene."*[18]

Raymond endeavored to perfect his skills at drawing and painting, and as he recalls, particularly enjoyed life drawing and drawing "something recognizable", which in his point of view is "fundamental to an architect". Here Raymond stated his early need to pursue the truth in all things. For him, the purpose of drawing, as a type of artistic expression should serve this purpose. Not to be mistaken with "realism", drawing would be for Raymond the preliminary step to the expression of the true nature of things that he would later endeavor to express through architecture.

Fig. 9 Live sketches of country life by young Antonin Raymond

In Raymond's school, pupils were also trained in the art of music, and had to play an instrument. As a reminiscence of this part of his education, in is not rare to see a cello in the background of pictures taken during later stages of his life. Yet throughout his life, Raymond's preference still remained drawing and painting, a passion for which he would temporarily gave up his career as an architect, in times of profound dissatisfaction that surrounded his debuts as a professional draftsman at Cass Gilbert's office in New York.

3.2 Painting in New York and Italy

Antonin Raymond was introduced to art from an early age and through the progressive education he received at the Realka in Kladno. This education was unfortunately not continued after the Raymonds' move to Prague, in the technical school. And Raymond experienced further frustration at the time of his employment in the firm of Cass Gilbert. However, the principles of his primary education remained present within Raymond's mind, and they were the reason behind his sense of dissatisfaction at the state of architecture in Europe and America.

After spending a few years at Cass Gilbert's office, and endless working on details imitating historical styles that Raymond had seen and lived in the context of their true quality, the young architect became deeply disappointed by what he recalls not only as the "*the deadly, uninspiring, strict eclecticism*" that prevailed, but also "*the complete absence of a youthful or critical attitude or any searching or hungering for solid spiritual or philosophical ideas in design seemed normal*." In fact, America had

deceived the young Raymond who had seen it as a promised land for a new architecture, when looking through the portfolios of Frank Lloyd Wright in Prague.

Just as he had found refuge in the contemplation of Nature, Raymond would seek refuge in painting, something that he had always found great pleasure in doing and that allow him to express his creative qualities with a freedom to which architecture was not yet ready to consent. In and joined a group of painters in New York., as Raymond says "*attempting to become a kind of avant-garde*".

In April 1914, after a strike of luck, which brought Raymond a sufficient well paid amount of rendering work, he left New York for a trip through Europe. During this trip, Raymond met an American sculptor by the name of Thrasher who introduced him to the city of Rome. Raymond spent some time in Rome, mostly painting the city and its surroundings in watercolour, just as he had once done in Řenčov and Prague. He also enjoyed discovering Rome's antic heritage through walks as he recall in the following words :

> *"The romantic promenades on foot and by horse carriage through Rome and the Campagna had a dreamlike quality."*[19] (A. R. An Autobiohraphy).

Following the suggestion of his friends, Raymond rented a small studio in the small mountain town of Anticoli Corrado. Raymond describes it as the typical Abruzzi town, with stone houses, and narrow alleys which lead the way to the piazza and the Church at the top of the town. Here once again, Raymond could feel the connection between man, nature and architecture, as he had in Prague.

For Raymond, this stay resulted in a form of rebirth, or rather liberation of things that he had long been eager to express but had not been able to in the harsh context of new York, in what Raymond referred to as his "*experience with the New York gangsters and the dull company in the New York Architectural offices*." As he concludes in 1970:

> *"The result of all this was an orgy of painting, a relief valve and expansion of the soul, after four years of terrible drought. I never painted as freely as I did then and never will; watercolours and huge oil paintings, melancholy and visionary, full of forebodings of things to come."* [20]

The assassination of Archduke Franz Ferdinand on June 28, 1914, precipitated the start of the war in an already tensed Europe. Raymond was forced to abandon his travel plans and interrupt his stay in Italy. Aboard the ship that was bringing him back to New York, he met his future wife, Noémi Pernissen. Noémi and Antonin immediately became aware of their common aspirations towards art and way of life, and got married after a little more than one year (December 15, 1915). Antonin Raymond rejoined Cass

Gilbert's office which provided him with the necessary money to eat and lodge, but he was soon overcome by the same feeling of uselessness and frustration that had driven him away from America one year earlier.

3.3 Introduction to Japan at Taliesin

Among the discoveries made during his days at Taliesin was the Japanese art collection owned by Frank Lloyd Wright. Raymond had first been introduced to Japanese art by his friend Hervey Wetzel, whom he had met on the boat traveling from New York to Europe. At the time of their encounter, Wetzel was an Assistant Curator of the Boston Museum of Fine Arts. Through Wetzel accounts of his traveling in south East Asia, Antonin Raymond's interest and curiosity towards the Far East started to develop.

Raymond recalls that this interest had first been triggered by what had at the time been considered as the heroic story of General Maresuke Nogi. This was after the Russo-Japanese war, around 1908, when Raymond was a student at the Polytechnic Institute in Prague. Raymond's testifies that the story of General Nogi "*awakened a profound admiration in (him) for the Japanese character and also created a desire to visit Japan and have some contact with the Japanese people*."[21]

In Taliesin, Raymond became familiar with Japanese wood block prints in particular, for which Wright had a true passion and which inspired not only his architectural vision and work but also the rendering techniques. Raymond worked particularly on the project called the "American system built houses". These small houses were meant to be affordable property to the average American family. Wright's project was based on the idea of assembling the houses on site, with parts which would be either prefabricated, either precut. Raymond attests that the module was three feet, a dimension which originated in Wright's trips to Japan. The drawings prepared by Raymond for the rendering were also to be printed a Japanese technique of woodcut.[22]

Raymond was thrilled and surprise by the visit of Aisaku Hayashi, the manager of the imperial Hotel, who appeared at Taliesin with his wife in traditional costume. Raymond recalls the "*beauty and design of their clothing and the charm of their manners*".[23]

4 Modern architecture as a necessity

4.1 The artistic and architectural intelligentsia in Prague

At the time of Antonin Raymond's move to Prague, new ideas on art and architecture had began to develop. Raymond recalls the architectural magazine "Styl",

created in 1909, dedicated to new ideas being developed in the field of art and architecture. This magazine was edited by the members of "club Mánes", which included the artistic and architectural avant-garde of Prague who were eager to "search for a sound philosophical and technological basis for design". It is important to consider the political context of Prague and Bohemia then part of the Austro-Hungarian Empire.

In his PhD dissertation, K. G. Helfrich points out that the purpose of the magazine Styl was to bring to the Czech the ideas not only developed in Vienna but also in Paris by the cubist movement, therefore contribution to a cosmopolitan trait of Antonin Raymond future way of thinking. It is however also important to say that the development of a local intelligentsia must have on the other emphasized a sense of national, or local identity that Raymond would also have to deal with in later years.

Raymond recalls how Bohemia was "clearly divided into Czech and German", a separation felt in everyday life during his days in Prague, which often resulted in fights against opposite clans. Although life was generally pleasant, tension was building up between too opposite sides, the desire for independence of the Czech population growing everyday. This national consciousness also nourished the intellectual life of the region, and consequently triggered the birth of a local avant-garde, inspired nevertheless by the ideas of German and Austrian Counterparts.

In this manner, the movement "Secession", born in Vienna under the leadership of Otto Wagner (1841-1918), saw its ideas relayed by Jean Kotera in Prague, addressing philosophical questions such as that of the relationship to tradition, truth, but also practical questions of construction and functionalism, and how to respond to the new needs of a rapidly changing society. Cubism and expressionism in architecture lead by figures such as Pavel Janàk, Josef Gocàr, Vladislav Hofman, Otakar Novotný. Raymond recalls that around the time of his departure in 1910, the Viennese "Art Nouveau" flourished in the rest of the Austro-Hungarian Empire, including Bohemia.

4.2 Modern architecture as a remedy

Towards his departure for America, Antonin Raymond experienced an increasing frustration and dissatisfaction in the manner architecture was being taught to him, and he recalls these painful days before the encounter that would change his life:

> *I felt a need to devote my life to finding out hat is good and what is bad, what is true and what is false, what is beautiful and what is ugly. All that with which we had so painfully crammed our memories seemed futile. I wanted to throw it all overboard. That scientific progress and the resulting practical applications create new ways of living and therefore new ways of planning, and that new materials dictate new forms,*

were ideas that took a strangely long time in crystallizing. In general the issue was not yet clear, and it took many years of struggle through confusion to understand.[24]
(A. R. An Autobiography)

Although Antonin Raymond left Prague in 1910, when the modern movement was on the verge of bursting all across Europe, the young architectural student had time to get a glimpse of what this meant for the future.[25] After going through a period of gloom and dimness, the future seemed to brighten for the young generation and for individuals such as Raymond who were craving for ways and means to free their creativity. The progress made in the field of industry which had until then been limited to heavy work and large scale was starting to flow into the daily life of ordinary people. Electric light, telephone and other inventions brought enthusiasm to the people, yet further enhancing the prevalence of bad taste and cheap goods, which had became affordable and available as a the less attractive consequence of industrial progress.

Raymond however recalls life in these times as "*profoundly interesting*" Where "*creative activity was stirring*", and where "*the pseudoclassical tradition was cracking up*". As Raymond confesses, for the young students, which may not have been fully able yet to grasp the philosophical, social and political implications of what was about to happen, the sudden surge of ideas and creative activity seemed "*rather vague and fantastic, but opened new vistas into the possibilities of a new freedom in living and design*."[26]

The development of the Prague avant-garde was so and meant that architectural magazines published in Vienna and Germany and literary works such as Otto Wagner's text book Modern Architektur (published in 1898 in Austria and translated in Czech in 1910) were becoming more and more available, and for young architectural students such as Raymond, they became a window onto the future. Raymond recalls how "horizons widened" and "one's blood began to circulate". It is it through these publications that he and his fellow architectural students discovered the marvels of steel structure being created in America, such as the first steel skeleton in Chicago (1889), cubist, expressionism and Art Nouveau in Europe. It was also through those publications that Raymond made the encountered the work of an architect that would change his life.

4.3 Frank Lloyd Wright : a hope for the future

Works by Frank Lloyd Wright were introduced through two kinds of sources in Prague. One was the German magazines published by Wasmuth in Berlin, and the other was the publications made by Jean Kotera, member of the Czech avant-garde, who

published a large portfolio containing Frank Lloyd Wright's works around 1909. Raymond recalls that these documents were greeted with excitement and enthusiasm and that they became "*a veritable fountain of wisdom and the subject of endless discussions.*" [27]

In Wright's works, the students found the inspiration they had been longing for, yet in another culture and another context. The enthusiasm of Europe for Wright's work meant that he found an echo in the quest for "universality" that would soon become one of the central challenges of the modern movement. A quest that would give birth to forms different to those created by Wright, but based on the same principles that he was one of the first to precisely express in form. As Raymond recalls, Wright had "*restated the principles of building; he had overcome the cell, liberated the plan, made space flow, given buildings a human scale and blended them with nature, all in a romantic, sensual and original way which left us breathless. He was what we had been longing for, a real revolutionary.*" (A. R. An Autobiography)

Upon seeing Wright's work and due to a conflict within his family, Antonin Raymond left Prague and went to Italy from where he reached the Austrian port of Trieste, hoping to embark on a ship for New York. Raymond had also experienced a dramatic episode with his school after steeling some money from the architectural student's club for which he had been appointed treasurer. These events pushed the young man to seek new horizons, and he left the Technical Institute without graduating, Through the figure of Frank Lloyd Wright, America, which was already experiencing massive immigration, presented itself as a beacon of hope for young Raymond. He recalls imagining that *"an enormous amount of new construction would be needed, probably in the spirit of Frank Lloyd Wright, the only American architect with whose work (Raymond) was acquainted*."[28]

Raymond worked as a draftsman for a few weeks at the office of a civil engineer, and in September or October 1910, he managed to get a job and embark on a small Italian freight steamer bound for the United States. He set foot in New York on July 22 1910.

Conclusion

In the present chapter, we have examined Antonin Raymond's background through an ensemble of four topics. The initial shell or private house, the presence of Nature in everyday life, the place of Art in Raymond's education and finally, the context in which he was first introduced to the pioneers of the modern movement.

The purpose of this approach of Raymond's intellectual and cultural background

was, on a first level, to provide elements for definition of his architectural identity, with the idea that one's architectural identity is before anything else built upon one's personal identity, and that this personal identity is for anyone determined by events and circumstances surrounding the time of childhood and youth. This is in my opinion particularly true if we consider the context of historical events that took place in the first half of the 20th century.

On a second level, these topics were chosen with the intention to provide grounds for the study of Antonin Raymond's way of thinking which will be studied in the next chapter 3. Finally the selection of four topics was intended to bring out at a later stage of the thesis, elements of Raymond's culture that played a relevant role in his relationship with Japan, on a cultural level. This is crucial for the understanding of how Antonin Raymond came to practice architecture and play a part in the birth of modern Japanese architecture. How while several other foreign architects came to Japan and sometimes practiced in Japan, Raymond came to be the only one to settle in the country and manage to play a part on the local architectural scene, while others simply limited themselves to the role of "representative" of western architecture in Japan.

The house is at the center of Raymond's architectural awakening. His image of the initial shell became embodied in a mild conflict between town and countryside, in which the town home awakened his conscience of the need for the casting of the old styles and for an architecture which reflects and fits the life of its contemporary society. However, the town also provided a sense of the value of tradition, embodied in the authentic architectural heritage of Kladno but most importantly Prague.

The countryside, on the other hand, as the place of connection with Nature, was the place where Raymond learned to appreciate earthen things, and developed an ideal for agrarian way of living at the farm of his grandparents. Here too, a sense a traditional value play a determining part in the way Raymond received the ideas of the pioneers of the modern movement. Wagner's appeal to Raymond stems no doubt from this conscious of the value of tradition, while Wright's love of Nature triggered the romantic and the poet in Raymond.

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[1] In a short paper on the life of Antonin Raymond, Irena Veverková tells the story of how Antonin Raymond stole the money from the architectural students' club for which he was appointed treasurer. Raymond claimed to have borrowed that money. A panel was held at school and the boy summoned to pay the money back, but the ordeal ended unresolved when Raymond left Bohemia to New York via Italy.

[2] *ibid.*, p. 10.

[3] *ibid.*, p. 11.

[4] *ibid.*, p. 12.
[5] A. Raymond, *An Autobiography*, Rutland, Vt.: Charles E. Tuttle, 1973, p. 9.
[6] *ibid.* p. 12
[7] *ibid.*, p. 22.
[8] These two expressions are borrowed form the editorial of The Architectural Forum, vol. 63, 1935.
[9] *ibid.*, p. 21.
[10] *idem.*
[11] *ibid.*, p. 21.
[12] *ibid.*, p. 23.
[13] *ibid.*, p. 23
[14] *ibid.*, p. 46
[15] *ibid.*, p. 48
[16] *ibid.*, p. 11
[17] *ibid.*, p. 18
[18] *ibid.*, p. 19
[19] *ibid.*, p. 33
[20] *ibid.*, p. 34
[21] *ibid.*, p. 40
[22] For detailed information of the relationship between Frank Lloyd Wright and Japane see: K. Nute, Frank Lloyd Wright and Japan: the role of traditional Japanese art and architecture in the work of Frank Lloyd Wright, London, Tokyo: Chapmann & Hall, 1993; J. Meech, Frank Lloyd Wright and the art of Japan: the architect's other passion, New York: Japan Society: Harry N. Abrams, 2001.
[23] *ibid.*, p. 52
[24] *ibid.*, p. 24
[25] On the question of Raymond's early departure from Prague, see C. Vendredi-Auzanneau, "Antonin Raymond's Intellectual Background: A Focus on the Czech Cubist and Modernist Architecture", J. Archit. Plann., AIJ, No. 572, 147-152, Oct., 2003. / アントニン・レーモンドの学問的背景：チェコ出身のキューウビストモダニズム建築に無点をあてて，日本建築学会設計系論文集　第 572 号, 147-152, 2003 年 10 月
[26] *ibid.*, p. 24
[27] *idem.*
[28] *ibid.*, p. 26

CHAPTER 3
AN INSIGHT INTO ANTONIN RAYMOND'S WAY OF THINKING

Introduction

This chapter focuses on the architectural discourse of Antonin Raymond. The material on which this study is based is a corpus of essays, lectures and articles written by Antonin Raymond and collected for the purpose of this study from Raymond's second summer studio in Karuizawa, Japan.

The date of the first document studied (1935) coincides with a peak stage of Antonin Raymond's first 15 years practice in Japan. By 1935, the Czech born architect had designed and built his most significant works of pre-war modern residential architecture in the country, which included his own houses in Tokyo (1924), and Karuizawa (1933). Raymond had also secured a well established reputation as a modern architect in Japan. This is testified for by a large number of publications in Japanese and foreign architectural magazines.[1] The culmination of this period also resulted in the publishing of two books of works.[2]

In parallel to his intensive practice, Antonin Raymond developed his ideas on architecture, and more particularly on modern architecture and the crucial consideration that should be given to Japanese traditional conception of space and building techniques. By 1935, he had reached a sufficient level of achievement, which, added to his experience of Japanese culture and architecture, allowed him to take part in the architectural debate by expressing his way of thinking not only on the drawing board, but also in writing.

His return to the United-States at the break out of the Second World War prompted him to share his experience as an architect in Japan and to make a statement regarding the position and the duties of the architect in the development of modern architecture:

> *"During the eighteen years that I stayed in Japan I often longed to find myself again amongst people of my profession to whom I could try to convey some of the ideas which moved me during my stay there and which I subsequently tried to express in my life's work."*[3] (A. R. 1938)

Considering the fact that Antonin Raymond's architecture is recognised in Japan but that little is known about his way of thinking, the aim of this chapter is to give an insight into the architect's architectural statement through the study of a selected number of his writings. These writings are devoted to the subject of modern architecture. The study has enabled us to distinguish two sub-themes from which the topic of this

section was chosen.

The first of these sub-themes is the study of the "*fundamental principles*" behind Japanese architecture. A. Raymond considers that the "*goal of modern architecture*" is the "*rediscovery*" of these fundamental principles.[4] The other theme is the "*Architect*", in terms of status and duty in general and in the context of Japan. The architect is at the centre of the various fields that interact in the process of architecture. He is a man of synthesis, and the key actor in society through which the development of architecture is made possible. As Christian Norberg Schulz explains: "[…] *one of his main tasks is to formulate problems on the basis of the various and often contradictory needs which are brought forth*."[5] (See Norberg Schulz, 1965).

The series of essays chosen for the purpose of our study consists of 17 texts written by Antonin Raymond in the form of lectures and speeches which were given in Japan and America, at Universities and Architectural Associations. The first reason for which these essays were chosen is because they are clearly aimed at the transmission of the architect's way of thinking. The second reason is because these documents have not yet been the subject of any thorough study in English or Japanese, although some of the selected writings have been translated in Japanese.[6]

Antonin Raymond also produced other kinds of documents. These include the two books of architectural works published in Japan towards the end of his first stay. The first book (1936) presented a series of projects realized between 1920 and 1935. The second book (1938) presented details of various projects through drawings and pictures. Then there are a number of articles and "letters to the editor" published in America or Japan through general magazines such as *Pencil Points, This is Japan* and architectural magazines such as *Architectural Review*, *Kenchiku Bunka* or *Shinkenchiku*. Lastly, Antonin Raymond published his own autobiography, first in Japanese[7] and then in English.[8]

1 Regarding the nature of Antonin Raymond's architectural discourse

1.1 Approach

The approach chosen for the analysis of Antonin Raymond's writings consisted of two phases. The first phase consisted in surveying the text in order to select keywords or expressions representative of the architect's ideas on the concept of "architect". These are words or expressions which appear repeatedly in the text and are of obvious importance.

The second phase consisted in gathering different words which refer to similar areas of the subject, therefore forming themes. Through this process, three main themes have

emerged from the selected essays. The following figure illustrates the above mentioned process, showing examples of selected keywords and the three themes which have consequently been determined as the core of Antonin Raymond's definition of what is an architect:

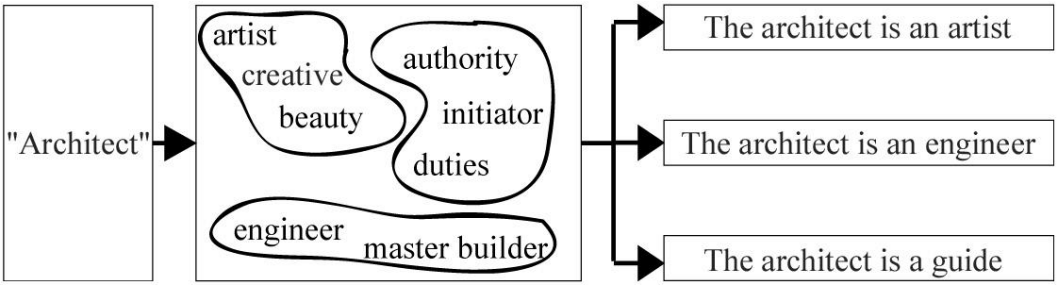

Fig. 10 Determination of the themes constituting the core of A. Raymond's definition of the "Architect"

1.2 Purpose in writing

In the context of our study we will consider the purpose of the architect in the act of writing. This purpose is divided in two levels. The fist level is that of the "stated purpose" and it is testified by Antonin Raymond in the following words:

"*The selected articles and lectures are concerned mostly with my struggle to clarify the basis and aims of contemporary design.*"[9] (A. R. 1967)

Then there is a second level of purpose, which is not stated by the architect and has to be determined by the reader through the study of the contents. *Architecturology*[10] teaches us that there are three levels of "unstated purpose" in architectural writings of the architect:

The purpose of promoting his own theory. In the case of Antonin Raymond this theory is based on the idea that the "*fundamental principles*" that lie at the base of traditional Japanese architecture should be used as the base to the conception of modern architecture. These principles are also named "*philosophy*" or "*idea*".

The purpose of what P. Boudon names "*the search for a universality of vision*"[11], which refers to the fact that the architect aims to give a universal value to his own theory. Antonin Raymond's writings are impregnated with words such as "*universal value*s", "*universal law*", "*absolute values*", "*infinity*", all used with the intention to assess the qualities of his point of view and of the principles of modern architecture as defined by him.

The purpose of situating oneself in the stream of ideas expressed by other architects.

This means that the architect might be associated with one of the various groups that compose the architectural scene, or on the contrary may be considered as an independent architect. The architectural discourse of the architect is also a competition tool. In the case of Antonin Raymond, this means that we are able to trace the influence he has received in the field of his way of thinking, for example from Frank Lloyd Wright or Le Corbusier. This process resembles the search for influence in architectural design, based on architectural ways of expression. These take the form of an architectural vocabulary.

The vocabulary used by the architect not only provides the reader with information about the contents of the architect's discourse but also influences his perception of this content. This leads to the question of rhetoric.

1.3 Rhetoric

The question of rhetoric refers to the way the discourse of the architect conveys his ideas. This is important in order to consider a last function of the architect's discourse as given by architecturology, which is the competitiveness of the discourse. As mentioned earlier, one of the main functions of the architect is to defend his idea, his position. This implies that he is in a competitive position among other members of the architectural community. Great architects of the past, such as Le Corbusier or Frank Lloyd Wright are characterized by their powerful rhetoric. The tone of their essays and the vocabulary they use, contribute for an important part in the impression of power attributed to their discourse. Consequently, it also contributes to reinforcing the doctrinal character of their discourse.

Although Antonin Raymond's way of thinking can be affiliated to that of Le Corbusier and Frank Lloyd Wright in its content, in the ideas he defended, it does not have the same extreme and emphatic character. It is situated somewhere between the romanticism of Frank Lloyd Wright and the rationalism of Le Corbusier. While Le Corbusier and Frank Lloyd Wright respectively developed their architectural discourse in the limits of there own culture, Antonin Raymond was exposed to different cultural contexts, which provided him with a wider view of the issues of architecture. Furthermore the important cultural and practical changes Antonin Raymond had to adjust to after his arrival in Japan, added to the influence of Japanese philosophy on his way of thinking could only contribute to the moderation and refining of his way of thinking.

1.4 Theory

Observing Antonin Raymond's writings in the light of *architecturology* enables us to determine the nature of his discourse. As we understood, his writings are dedicated to explaining and promoting the architect's own ideas and principles, but not about architectural theory[12]. This is for example illustrated by the fact that the word "*theory*" never appears in Antonin Raymond's writings. The discourse serves a selfish purpose, and in that sense, Antonin Raymond's discourse is of a doctrinal nature. It is used to legitimate certain concepts rather than to provide the reader with a precise definition of these concepts.

For example, in Antonin Raymond's writings it is the case of the concept of "*truth*". Although through his writings, the architect provides the reader with the means to interpret his definition of "*truth*", or at least to understand to which conception of truth one may associate it, he does not himself give this definition as a concept. In any case, it is the responsibility of the reader to define the concept of "truth" in the view of Antonin Raymond.

2 The architect in Antonin Raymond's way of thinking

2.1 The architect is an artist

2.1.1 Antonin Raymond and Art

The idea of considering the architect as an artist appears throughout Antonin Raymond's writings. Indeed, his immediate environment always provided him with a direct contact with art, from an early stage in his life. It is important to mention that he was himself a skilled painter. In 1914, before the beginning of WWI, Antonin Raymond spent a few months in Italy where he fully dedicated himself to painting.

Fig. 11 Antonin Raymond in his studio in Anticoli Corrado (Italy), 1914.

Later, while working at Taliesin with Frank Lloyd Wright, he also had the opportunity to be introduced to Japanese art, of which the American master was a great collector. During his stay in Italy, Antonin Raymond had also befriended Harvey Wetzel, assistant curator of the Boston Museum of Art which had one of the most important collections of Oriental art at the time. Lastly, his wife Noémi Pernissen was herself an artist and designer, and she collaborated with her husband on a great number of projects.

2.1.2 The architect and the artist

In Antonin Raymond's writings, the definition of the artist is the following:

> *"Whether a man is a real artist or not is determined by whether he has an ability to express through his work the relationship between men and the universe."*[13] (A. R. 1953).

During the first years of his stay in Japan, Raymond endeavoured to study and understand the principles at the base of Japanese architecture, which fascinated him as soon as he had set foot in Yokohama, on New Year's Eve, 1919. One of the main aspects of Japanese architecture that he quickly grasped was its connection with nature, expressed through the use of natural materials, often unadulterated, and through the conception of space.

It is in the expression of this connection between man and Nature, where Nature is considered as a symbol of the greater universe, that Raymond establishes the common purpose and position of the architect and the artist:

> *"Whenever the artist is at work, be it in music, poetry, painting, sculpture or architecture, he comes face to face with the laws of Nature, which keep order in the Universe."*[14] (A.. R. 1949).

In the context of architecture, this relationship between men and the universe takes form through the expression of what Antonin Raymond calls "*a spiritual idea*" (See Raymond, 1949):

> *"The man is happy when he is in contact with the Universe, God and nature that surround him and feels them close to himself. An architect is an artist who builds a structure which gives men such happiness when they are in it."*[15] (A. R. 1953).

The architect and the artist, however, do not only meet on the grounds of a common purpose of expression. They also share an attitude towards society:

> *"Amongst the free men, the creative artist is the truly free agent. He alone in nature is the creator and his virtue and duty is, one might say, the perfect use of freedom, that is to create beauty."*[16] (A. R. 1949).

Raymond further states:

"A real architect must be an independent artist. He must have freedom and strength to stick to his principles."[17] (A. R.1953).

For Antonin Raymond, independence and freedom are vital to the architect and the artist in order to protect them from anything which might compromise their creative work. In this particular essay, Antonin Raymond is referring to the context of architectural practice in Japan at the time. Architects were then very dependant on contractors, who acted as intermediates between them and the client. As he testifies, these contractors:

"[were] not interested in anything other than pleasing their customers and making money."[18] (A. R. 1953).

2.1.3 The expression of beauty

In Antonin Raymond's way of thinking:

"Mere functionalism is not sufficient to create great architecture."[19] (A. R. 1940)

and he further states that:

"It is the architect's job to create beauty in every house, no matter what the economic level is."[20] (A. R. 1945).

This statement echoes his conception of beauty in architecture, as it is expressed through art or poetry, or any creative activity connected to the expression of the connection between man and the Universe. This connection is based on the rules which govern the Universe and which Raymond qualifies as "absolute values":

"It is this search for absolute values and absolute truths, as revealed in the creations of an artist, that constitutes the artistic creation's worthiness and real beauty."[21] (A. R. 1949).

These values are opposite to what he names "relative values", in the following terms:

"Sensual and material satisfactions are, what I call, relative values."[22] (A. R. 1949).

For Raymond, traditional Japanese houses offered the best example of this expression. In his view, true beauty was to be found in the:

Simplicity and inimitable poetry of the Japanese room."[23] (A. R. 1935).

At this point, it is necessary to indicate that Antonin Raymond's discourse on art and the concept of beauty in architecture is not only the consequence of his encounter with Japan. It is also strongly related to his battle against the old establishment of the French Ecole des Beaux-Arts, which at the time was still setting the aesthetic standards in mainstream art and architecture. This institution represented all the ideas against which Antonin Raymond and other defenders of modern art and architecture were fighting, whether it be in Europe, in America or in Japan. This establishment promoted what he

refers to as:

> *"The styles and the straight jackets of beauty that had made life so easy and had safeguarded mediocrity over many centuries."*[24] (A. R. 1946).

This statement refers to the later half of the 19th century, during which the majority of architects continued to design according to past aesthetic standards, regardless of the changes in society's life style. Antonin Raymond fought against this state of affairs throughout his career. He refers to this problem in the following words:

> *"Just think of the colossal failure […] of all those designers that did and do get all their knowledge and inspiration from copying empty forms and colors and textures and proportions of the cadavers of past expressions, instead of creating from their own palette."*[25] (A. R. 1949).

2.1.4 The achievement of beauty

After defining the relationship between the architect and beauty, we are now able to point out in Antonin Raymond's writings, the means through which the architect can achieve beauty in architecture.

First, Antonin Raymond reminds us that:

> *"Beauty of form grows out of motivation and purpose."*[26] (A. R. 1940).

This refers to the 'spiritual idea', or 'purpose' that should be the base of every design. Naturally, this purpose also includes a functionalist dimension. However, function can never be the sole purpose of architecture. Function can only: "*figure alongside the spiritual idea*" (See Raymond, 1949). According to A. Raymond, the "*spiritual idea*" can only result in beauty under the following condition:

> *"Beauty will result only when the designer is a creative artist, and has a powerful aesthetic conception."*[27] (A. R. 1940).

Regarding the work of architecture, this therefore means that beyond functionalism:

> *"The architect still has the larger part of his work before him in converting sensible architecture into beautiful architecture."*[28] (A. R. 1940).

Antonin Raymond witnessed such an achievement of beauty in the context of Japan. It is from the observation of the Japanese house that he understood how beauty could be attained in architectural design:

> *"It is through increased simplicity and elimination that the man of taste finds elegance."*[29] (A. R. 1935).

That is not to say that beauty can be achieved by mere economy of means, or considered:

"[…] as a luxury item to be left on or off depending on cost."[30] (A. R. 1945).

Nor should it be aimed as such by the architect:

"We should not aim for beauty, but deal with realities and from the inside out, and if we can confine ourselves to this only, beauty will come as a reward."[31] (A. R. 1938).

Indeed, any attempt to achieve beauty solely as a means to satisfying ones personal taste is bound to fail. As we have mentioned earlier, it is most important to give priority to a clear purpose or idea behind the design. Antonin Raymond says:

"A design cannot be beautiful, without such message, no matter what form, color or workmanship it has."[32] (A. R. 1949).

2.2 The architect is an engineer

2.2.1 The relationship between the architect and the engineer

In his early writings, Raymond emphasizes the vital aspect of a close collaboration between the architect and the engineer, stating that they must:

"[…] work hand in hand […] from the beginning (of the project), in order to find not an extraordinary solution, but the simplest, the most direct and most economical solution of the problem."[33] (A. R. 1938).

However, in his endeavor to achieve such an aim, Raymond soon realized that the architect needed more than a simple collaboration with the engineer. In fact, the architect had to become one himself:

"The aim of the architect is to plant once more his feet on the ground, to work naturally and from inside, to avoid outside artistic and abstract influences, to become once more an "Architect" which means "Master-Builder."[34] (A. R., 1938).

This realization was enhanced by the context of Japan, where the architect in the western sense did not traditionally exist, and the carpenter played the role of architect and engineer at the same time. It became clear to A. Raymond that architects should master construction as well as conception of space in order to achieve their aim:

" […] unless the architect wakes up and fulfills once again the role of the master builder, he will disappear from the scheme of things in the modern world and be relegated to play the role of a picture maker and a crank on historical or even modern styles and fashions."[35] (A. R. 1938).

He further states:

"To obtain unity of design, they must rely on themselves."[36] (A. R. 1940).

The rise of Antonin Raymond's concern regarding the capacity of the architect in the technical field coincides with the period of transition during which on one hand industry was undergoing major changes, resulting in the availability of new materials and

techniques in the field of building, while on the other hand, the majority of architects was mainly concerned with ornamentation and decoration. This later resulted in what he describes as follows:

"Designers, whether they are architects or designers for the industry, have, as a rule, little idea how their designs are to be executed."[37] (A. R. 1940).

Raymond applied this concern to the organization of the architectural office, stating that:

"In a real architect's office there are no such employees as draftsmen. They are all architects and engineers."[38] (A. R. 1962).

He applied this principle to his own office in Tokyo, before and after World War II, often recruiting young Japanese architects who had studied abroad:

"[…] I had architects and carpenters, carpenter estimators, construction engineers and mechanical engineers right in my office."[39] (A. R. 1938).

From Raymond's point of view, only an office organised in this way would give birth to what he called "true architects":

"The most hopeful architects in Japan "are those who have acquired the benefits of modern scientific engineering and Western architectural education, who are conscious of the rich treasure of their own tradition."[40] (A. R. 1953).

2.2.2 A key to freedom

Antonin Raymond, as we have seen, considers freedom as one of the main needs of the architect. While the artist side of the architect provides him with the aesthetic culture and the desire for beauty, the engineer has a larger part to play in the fulfilment of the need for freedom. This freedom aims at liberating the constraints imposed on him by the contractor and the establishment representative of old styles.

The development of industry, particularly in America, provided the architect and engineer with what the architect refers to as:

"The process of liberation and rediscovery."[41] (A. R. 1938).

One of these developments concerned the steel industry, in which he saw a means to create a clear break with the past:

"Steel brought with it new concepts of structural stability and extreme emotional instability for the hapless guardians of architecture."[42] (A. R. 1946).

Antonin Raymond is here once again referring to the representatives of the old establishment with whom he is eager to create a clear break. For him, the development of the steel industry had a direct impact on the quest for freedom and its expression in

architecture:

> *"Space is infinitely flexible. No longer are you doomed to reside in cubes and rectangles, no tradition regulates door heights nor determines corridors."*[43] (A. R. 1940).

According to Raymond, another means of fulfilling freedom through developments in the industrial realm is standardization:

> *"To my way of thinking, standardization is a tool to free the architect for a more economical use of his capacities."*[44] (A. R. 1945).

Standardization is the key to:

> *"[…] the need for a continual simplification of parts and procedures, for relating all products and processes to each other and to the specific requirements that they are intended to fulfill, and of improving overall design in relation to these developments and to changing patterns of life."*[45] (A. R. 1945).

These words show the importance of the part played by the engineer in the achievement of the goal of modern architecture, that is, to provide the most direct and simple solutions to the problems that challenge the architect in modern society:

> *"In what way does modern architecture meet all these ways of our modern life? Freedom – you can find it portrayed in the span of our bridges, the sweep of our roads, in the wealth of material which we have never known and with which we are experimenting daily."*[46] (A. R. 1940).

2.2.3 The tools of the architect-engineer

Antonin Raymond studied at the Prague Polytechnic, which means that he was initiated to engineering very early in the course of his architectural education. The importance of education was further emphasized by his master Frank Lloyd Wright. Later, the discovery of Japanese architecture convinced him that architects should be educated to value the vital role of the connection between the architect and engineering:

> *"The architect has to have a thorough schooling in building itself. It is only through building that he can learn how to design."* […] *"It is only because of [a] direct contact [with building] that he can become worthy of the name of "Architect" i.e. the "Master Builder."*[47] (A. R. 1938).

By receiving a thorough education in engineering, the architect is not only free, but also able to use the tools that are provided to him by industry in order to create beautiful and economical architecture. In his way of thinking, this is achieved by a simple and clear use of these tools:

"The simpler the means of expressing a real idea in design, the stronger the expression becomes, the more powerful, the more true and therefore beautiful."[48] (A. R. 1949).

"We must know the aesthetic meaning of the different materials besides their structural qualities."[49] (A. R. 1938).

Throughout his career, Raymond wrote about his observations of the Japanese house, which provided a perfect illustration of this principle:

"Structural beauty is best shown in Japanese structure"[50] (A. R. 1953) *"A column is a column, a beam is a beam, undisguised and unornamented, but doing its work perfectly."*[51] (A. R. 1938).

Antonin Raymond was also fascinated by the Japanese shrine, particularly that of Ise, which in his opinion represented the epitome of the way construction should serve the purpose, or the spiritual idea behind the design:

"*There we see exemplified not only the most direct and simple solution to a problem aimed at by architects today, but also construction used as an aesthetic element which is of course architecture in its purest form.*"[52] (A. R. 1940).

It is upon these observations that he gradually formulated his own set of principles regarding modern architecture:

"In modern architecture, construction is the only decoration."[53] (A. R. 1940).

These principles are not only a source of inspiration for Raymond, but also a link with the past. The Czech born architect was a great admirer of the architects of the Gothic period, and he felt a timeless connection between them and modern architects who would be able to grasp and use Japanese principles of design in the name of modern architecture:

"The real architects of all ages expressed beauty by structure itself."[54] (A. R. 1953).

Beauty of structure may be achieved through the use of many materials at hand, on the condition that they themselves reflect the importance of nature in the principles of a modern architect:

"An architect's palette should be of infinite richness, it should be very close to the richness of nature."[55] (A. R. 1949) *[...] "We see beauty in natural wood, in well worked metals. We again feel their quality, their meaning in the universe."*[56] (A. R. 1940) […] *"All materials used for genuine Japanese architecture are used as they are, they are not covered with mortar or paint."*[57] (A. R. 1953).

Antonin Raymond's first statement of this idea was embodied in his project for his own residence in Tokyo in 1923, which was the first example of a raw concrete finish residence in Japan. In the following extract, he explains the qualities of this material:

"The reason for natural finished concrete are both practical and aesthetic. Permanent surfaces (are) integral with structural (ones), or even better, part of the structural element. […] From the aesthetic point of view, the following everlasting principles always govern my work. Naturalness is more beautiful than artificiality. Simplicity and clarity are more beautiful than wastefulness both of spaces and materials and all those aesthetic qualities must stem from the functions of the structure both practical and aesthetical."[58] (A. R. 1961).

2.3 The architect is a guide

2.3.1 Writing and purpose

The very nature of the selected writings, being mainly in the form of lectures and speeches, conveys the idea that Antonin Raymond was animated by a strong need and will to express and communicate his way of thinking about modern architecture. In fact, observing the selected essays in the light of architecturology (See Boudon, 1992) allows us to consider that Raymond's writings are of a doctrinal nature. This means that his discourse aims above all at serving the architect's own ideas as well as convincing other members of the profession and the general public of their value and validity. The following excerpt illustrates the strong kind of tone and rhetoric that Raymond sometimes used to address architects in order to convey his ideas. This particular speech was made in front of an audience of architects in the context of post-war America:

"[…] my intention is to sweep you off you feet, to make the fact of modern architecture so true and so desirable, that those of you who are sold on it already will pursue it with renewed fervor; that these for whom it is still questionable will unreservedly make the vow of taking up the new […] and joining the army of young soul(s) who are today marching forward in greater and greater numbers along the road toward direct, simple, creative architecture.[…] Your importance is enormous. Your power is deadly: and it is just that power that I want to turn to the destruction of the old and the embracing of the new, so that we may all work for creation."[59] (A. R. 1940).

In the introduction to his essays, Raymond also testified of his need to convey his thought and experience in the following terms:

"The selected articles and lectures are concerned mostly with my struggle to clarify the basis and aims of contemporary design."[60] (A. R. 1935).

And further:

"My life and that of my wife was directed since 1920 towards introducing Japanese

design philosophy of all arts but principally of architecture to the outside world and teaching the Japanese architects Western architecture based on the principles of earliest Japanese design philosophy."[61] (A. R. undated).

2.3.2 Guidance towards architects

Antonin Raymond's writings reveal his concern for two main fields of action within which the architect can play the role of a guide. The first field is that of education. For A. Raymond, it is particularly important to reestablish a lost contact between the architect and the knowledge of construction, or in other words between the architect and the engineer:

"Another step in re-establishing the solidity under the feet of the architect is to revise radically the architectural education in our colleges and universities. […] to make the engineering of all kinds pertaining to the art of building the basis of their education just as engineering is the basis of all building."[62] (A. R. 1938).

The second field of action is the professional environment of the architect. This may take place in the office, as we have seen earlier, where Antonin Raymond himself endeavored to transmit his knowledge and conception of space and building. It may also take place during meetings and assemblies of architectural associations, for which an important number of Raymond's texts were in fact written.

In the case of Antonin Raymond, this type of guidance mainly took place in America, where he regularly addressed an audience of American architects with whom he shared his experience of Japan. This experience made him see the problems of American architecture in the post war period more clearly, and during his speeches, he endeavored to give his point of view on them. In a speech on the role of architects in regards to the housing problems of post-war America, he addresses the architects in the following terms:

"I think the architect today is shirking his responsibility if he turns his back on this problem and directs his efforts solely to the luxury category of building."[63] (A. R. 1945).

In Raymond's opinion, the American architect also lacked independence and strength of character, mainly due to his obsession with material success, which sometimes resulted in the architect being dominated by the client, an idea that Raymond resented:

"The architect still anxiously surveys the likes and dislikes of his client. […] The architect should have the courage and authority […]."[64] (A. R. 1938).

2.3.3 Guidance towards society

Antonin Raymond was passionate about his profession, and he did not forget that the architect has a responsibility towards society at large as well. Yet he also believed that society and the architect should work hand in hand to achieve progress:

> *"The architects should be guides and initiators in creating a better and better environment for living. […] In order to achieve this, they should lure the populace to elect cultured and unselfish legislators instead of the politicians, lawyers, etc. which form the majority in legislative bodies."*[65] (A. R. 1960).

In these words, he emphasises the idea that while the architect's effort should be directed towards creativity, society has a more political role to play.

Raymond was also critical of American society. After returning from Japan, he felt particularly ill at ease with what he felt as a very materialistic society, particularly when it came to aesthetic considerations and the definition of the concept of beauty:

> *"They begin with a preconception of what is beautiful rather than with fundamentals and allow beauty to arrive of its own accord."*[66] *(*A. R.*, 1938).*

On the other hand, the architect praised Japanese society, because its context had allowed him to experiment thoroughly upon the principles of modern architecture:

> *"The desire of the Japanese public for a modern environment made it easier for me to create with a freedom in which I was aided by lessons learned from ancient Japanese architecture. Today, the general public with the sense of newly found freedom is willing and even anxious to accept what goes under the name of modern architecture […]"*[67] (A. R. 1967).

Indeed, Antonin Raymond's relationship with Japan and his Japanese clients in fact played a great part in the development and promotion of the idea according to which the architect is an artist:

> *"I found that Japanese clients, almost as a rule, have respect for the opinion of the artist, be he a painter, a sculptor, an architect, a musician, or a writer and that is why the clients choose and employ him. I often wonder, when I deal with Western clients, about their lack of judgment in thinking that an artist is just a tool and that a client's own likes and dislikes will result in something of permanent value."*[68] (A. R. 1962).

Conclusion

The study of Antonin Raymond's writings has revealed that the architect is at the centre of his architectural discourse. From the study of Raymond's writings, it is possible to say that to talk about architecture is to talk about the "architect". Raymond writes about the "*Architect*" with a capital "A" which refers to his idea of a "universal"

definition of the concept of "architect". This idea is also embodied in the term "*true architect*".

The qualities of the "*true architect*" should enable him to respond to the permanent and unchangeable needs of all human beings for dwelling and beauty. In Antonin Raymond's way of thinking, it is essential that a modern architect has these qualities in order to achieve his task. The architect's duty is to find "*the most direct and simple solution*" to the problems presented to him by society, in the creation of beauty, and in the achievement of an economical architecture.

The study emphasised the task of the architect as *artist*, *engineer* and *guide* in Antonin Raymond's way of thinking and the means that Raymond promoted for the achievement of these tasks. Based on this study of the three "faces" of the architect it is possible to say that in Raymond's way of thinking, the 'artist' facet of the architect provides him with an aesthetic purpose, which is the achievement of beauty. Raymond particularly emphasised this aspect of the architect's definition for he was himself involved in painting and temporarily interrupted his career as an architect to become a full time painter in 1914

The 'engineer' facet of the architect provides him with the means to achieve this purpose by allowing the architect to find the most simple and economical solution to a problem. As an engineer, the architect's biggest asset is freedom. Finally, the 'guide' facet of the architect is the one through which he shows that he is politically conscious and interacts with society, including other architects. This facet of the architect stands out in Raymond's own personification of the architect if we consider his writings which are for the majority written in the form of lectures and articles. This point testifies for his need to share and communicate his experience as an architect to his peers and to society.

Beyond the definition of the architect, Raymond's writings testify for his need to share his experience and to articulate a theory that would allow him to contribute to the debate on modern architecture from his personal perspective, that is, from the perspective of an architect working in Japan.

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CHAPTER 4
AN INSIGHT INTO ANTONIN RAYMOND'S WAY OF DESIGN

Introduction

This chapter provides an insight into Antonin Raymond's way of design, which constitutes the second step towards a definition of his "Architectural identity". Antonin Raymond does not precisely refer to his way of design in his writings, which makes this enquiry all the more necessary and interesting. Raymond does not provide sufficient information of the way he proceeds to combine Japanese and western space in his way of design. Yet in the context of a study which aims at giving elements for a definition of Raymond's "Architectural identity", it is essential to know through which process works materialise. Therefore the study is based on the observation of a selection of Antonin Raymond's residential designs.

The chapter is divided in three parts. In the first part, we look at the birth of the architectural profession in Japan and its condition at the time of Antonin Raymond's debuts as an independent architect. It is part of the preliminary work we must carry out before the architectural analysis and discussion carried out in the second and third parts of the chapter. If we ambition to grasp the architect's way of design, it is necessary to look at the conditions in which type of professional environment this way of design was developed. The purpose of this section is also to highlight the manner in which Raymond responded to the difficulties brought by his position as a foreign architect in Japan, and the role of his collaborators in the evolution in his way of design.

The second part of the chapter provides consists in a rational survey of the *tatami* rooms in a selection of projects. The study is carried out on a quantitative and qualitative level, in terms of 'size', 'function', 'situation' and 'proportion of space occupied within the house'. This study, along with the architectural analysis presented in the third part of the chapter is based on documents collected first hand at Raymond's architectural office. The results of this approach are presented in various tables that will allow comparison between different houses and between houses designed for Westerners or for Japanese occupants. The information thus obtained reveals Raymond's response to the transformation of lifestyles in Japan and its impact on residential design in the 1920s and 1930s. This study also introduces the analysis carried out in the third part of this chapter by partly revealing the design process through which Raymond operated a synthesis between western and Japanese traditional architecture through the use of *tatami* as proportion module.

The study of this synthesis is further deepened in the third part of the chapter, through the architectural analysis of Raymond's Karuizawa house, built in Karuizawa

for Raymond and his family as a summer house and studio. This section represents an attempt to decode the complex synthesis process through which various elements of western and Japanese architecture, in terms of design approach, form and construction, were combined to create this exceptional work of residential architecture.

1 A modern architectural practice in Japan

1.1 The architectural profession

1.1.1 The birth of the architect in Japan

Before the Meiji restauration, the responsibility of building and design was in the hands of the designer/carpenter, who worked in collaboration with a client, a patron and in some specific cases, an artist. “Building” was then one of the components of a larger body of professions that mirrored the creative facet of Japan and was in charge of perpetuating its age long tradition for arts and crafts.[1] The very strict rules imposed by the Shogunate upon society also insured that members of the professions stayed constricted to their social rank. From a strictly professional point of view, this insured the transmission of knowledge and skills from generation to generation and placed the emphasis on the perfection of acquired skills and methods, rather than on random individual innovation. Innovations and style evolution could only occur within the margins authorized by the Shogunate.

As far as building was concerned, everything from the size of property, to materials used, tatami sizes, trims colors, to the size and shape of doors and gates was dictated by the Shogunate and intended to clearly reflect social rank and was kept as such until towards the end of the Tokugawa regime. So the pattern of the building organization was similar or that found in pre-modern western societies, where the role of the carpenter was held by the master mason. To illustrate this pattern we may look at the example of the Katsura detached Palace, since we will refer to this complex of buildings again further along this dissertation. Katsura Villa was the fruit of a collaboration between a tea masters and carpenters as Antonin Raymond pointed out. In Meiji era we find the carpenter/designer.

The birth of the architect meant that a building was no more considered as a mere reflection of a style, but could be created by an artist who mastered the design and the technique. This gradually put an end to barbaric practices such as the one which consisted in ordering plans from abroad. In the late 1870s, this meant in effect that the architect was designing a house for a place he could not see. Not would he have been aware of how to design according to the particular weather conditions and technical capacities of Japan. So in fact the birth of the architect meant a return to tradition of the Japanese craftsman. On one hand, the birth of the architect meant that modernization

could be achieved from home if not a return to tradition to a certain extent, in the fact that it allowed the reconnection of the evolution of building practice with tradition. But it also announced the separation of design and construction that Europe was already experiencing.

With the birth of the independent architect, come the replacement of a state driven intention by an individual intention in regards to the purpose of architecture in Japan. Before the birth of the independent architect, western styles were imported with the specific intention to serve a political and economical purpose, that is to project an image of new modern Japan back to the world where these forms had been imported from, in order to "interact with western powers on equal terms"[2]. The advent of modern architecture comes also its main root, that is its concern for the well being of man as an individual and a community.

1.1.2 Architects in the 1920s, an emerging category

The expression pioneers of modern architecture is commonly used to refer to the first western architects to have expressed the will to combine technique and aesthetics to create an architecture in phase with their time. In the context of Japan, it is necessary to look at the implications of such a term if we are to understand the position of Antonin Raymond at the time of his beginnings as an independent architect.

1.1.3 The birth of architectural practices

Raymond worked with Shimizu Construction Corporation. A firm founded by the adopted son of Kisuke Shimizu, who had began as a carpenter/designer in 1804. He created an independent practice in Yokohama in 1859, after the fall of the Tokugawa regime. Kisuke's practice was taken on after his death by his adopted son, Shimizu II, who developed it into one of the most famous Construction Corporation. As Dana Buntrock stresses in her enlightening book on architectural practice in Japan, the success of Shimizu Corporation has been partly explained by the fact that it dealt from a very early stage with both western and Japanese construction contracts. Yokohama would indeed have been a strategic location for anyone wanting to mingle with the foreign community, being one of the 'treaty ports' – so was Kobe – where expatriates were confined in the early Meiji era. Professor Fujimori has also argued that in the case of Shimizu, his early collaboration with the American R. P. Bridgens played a crucial part in the future success of the firm[3]. It was through him that he became acquainted with western buildings stylistic features that later became his trademark. In 1891, Shimizu was in charge of the construction of Nikolai Cathedral, designed by Josiah Conder. Therefore, when Antonin Raymond moved into the Marunouchi building, he

was approaching not just any construction company but one created by what historians have qualified as “one of the most skillful of Japan’s early “Western-style” designers.”[4]

1.2 Antonin Raymond’s architectural office

1.2.1 Composition

Antonin Raymond’s office was initiated in 1920 and officially took the form of what would eventually turn out to be a short term partnership with the American architect Leon Whittacker Slack (1887-1964), a graduate of Princeton University who had been working for William Merrell Vories (1881-1964)[5]. The partnership started from January 1921 with the financial support of ‘The American Trading Company’, located in the Mitsubishi building (三菱 21 号館) at Yurakucho (愉楽町), in the Marunouchi district (丸ノ内). Raymond and Slack named their partnership ‘The American Architectural & Engineering Company’, and set up an office of the 5th floor of the same Mitsubishi building. In an interview given to *Kenchiku* in 1961[6], the former and most faithful employee of Raymond’s office[7], Masanori Sugiyama (杉山雅則), remembered that in the very beginning, the office employed 2 American engineers and 6 or 7 Japanese draftsmen. Some of the Japanese were Sugiyama himself, Keizō Uchiyama (内山隈三) a “survivor” of Wright’s office, Hanjirō Omoda (小茂田半次郎) and Otonosuke Nyora (女良己之)[8].

During the two years preceding the Great Kanto earthquake, the office gradually grew in size and work started to come in, mainly thanks to a network of Western and Japanese well off clients with whom Raymond had become acquainted through the Tokyo Club[9]. Staff came in and out, and various architects and engineers were employed from Japan and the United States. In 1921, Ken Fujikura (藤倉健) and Jōkichi Tominaga (富永譲吉), two young Japanese who had graduated from American Universities joined the office[10]. These young architects belonged to the early generations of Japanese architects who had inherited the two complementary approaches of Chūta Itō (伊藤忠太) and Riki Sano (左脳利器).

The office team was subject to frequent changes, as Sugiyama recalls an uncomfortably strained atmosphere[11]. In another interview[12], he mentioned how the American style management of the office meant overnight dismissal and swift replacement for anyone who couldn’t or wouldn’t comply with Raymond’s expectations and uncompromising temper. Kunio Maekawa also recalled Raymond’s frequent uproars, during which pencils were thrown at bewildered employees across the room, incidentally stating that he himself had never been the target of such barbaric behavior[13]. In this respect, Raymond’s personality is not without reminding that of his master Frank Lloyd Wright, as we will see later. His determination to attain the best

possible level in both design and realization left no room for compromise within the office.

After 1923, the office continued to grow, while the frantic staff turnover gradually slowed down, to finally stabilize towards the 1930s. This was in great part due to the arrival of various talented young architects, some of whom became famous in later years. It was the case of Junzo Yoshimura (吉村順三/ 1908-19), who worked with Raymond from 1928, and Kunio Maekawa (前川国男/ 1905-1986). He returned from Paris in April 1930[14] and joined Raymond's office in August, where he worked until September 1935. In the pre war period, the peak of Raymond's office stability is illustrated by the famous picture taken in 1935 on the roof of the *Kyōbunkan*. At that point, the office included over 20 members.[15]

Other members of the pre war time office included the Czech structural engineer Jan Švagr (from 1923 to 192X). Raymond had met him in Shanghai[16]. But Švagr was to leave the office during the conflict that opposed Raymond to other members of the design team for the St Luke's hospital. J. Švagr is only one of the several western collaborators who were either encouraged to leave or did so as a consequence of being unable to deal with Raymond's demands. It was also the case of another famous of his collaborators, Bedřich Feuerstein (1896-1936), who joined the office from May 1926, until 1928. Feuerstein collaborated on important projects such as the Rising petroleum Company's offices and housing (1929) and the Soviet embassy (1929). Antonin Raymond invited his compatriot to join him in Tokyo after meeting him at Auguste Perret's office, where Feuerstein was working[17]. Feuerstein was well known in Bohemia as a stage designer and published a book presenting his own work in Europe and Japan in 1927, with a cover designed by Masanori.[18] The collaboration ended as a consequence of a conflict between Raymond and his three collaborators on the St. Luke's hospital project (from which he subsequently withdrew) in 1928.

1.2.2 Location

The office moved several times, in 1926 (to *Yaesu biru* 八重州ビル), 1927 (to *Tōkyō kaijō biru* 東京海上ビル) and 1934 (to *Kyōbunkan* in the Ginza district 教文館、銀座). In 1938, Antonin Raymond accepted an invitation to build a dormitory for the ashram of the Indian philosopher Sri Aurobindo Ghose. Finally, Sugiyama testifies that it was he who was left to take the office over before the outbreak of the war of the office when Antonin Raymond left for India in 1938, from where he was advised to go back to the United States, in view of the growing anti American feeling sweeping over Japan. After barely coping with military commissions for a while, Sugiyama was compelled to close the office in 1941. It was subsequently reorganized in 1947 upon

Antonin Raymond's return and officially reopened as '*Remondo Kenchiku Sekkei Jimusho'* (レーモンド建築設計事務所- Raymond Architectural Design office) in 1948.

1.2.3 Management

Unlike the name of the office, which emphasized a rational character and a business orientation, both inherited from the architect's American experience and its connection to the specificity of his partner and financial resources, the composition of the office could be considered to be relevant of Raymond's early intention to become closely involved with Japanese architecture and consequently that he was conscious of the fact that this work would not be able to achieve his goal without the help of Japanese staff. However, in his interview, Sugiyama says that most of the other Japanese staff employed by Raymond came from Wright's office and some had also graduated from American Universities. American engineers were hired.

From a purely financial point of view, we must also remember that at the time Japanese staff was paid far less than foreign staff. In the same interview, Sugiyama exhibited documents dating from 1924, pointing out the fact that he was paid 90 yen/hour while a foreign member of staff such as the Czech engineer Jan Švagr[19] was paid 600 yen/hour. Sugiyama also recalls that the office was run in an American style and that the main language was English. He himself could speak "broken English" (片言の英語), in which meetings were also held.

Raymond understood that as much as he had set out to play the role of a master of modern architecture, he would be able to achieve neither his technical goals nor his artistic goals (I discuss these goals in the following section, in the paragraph entitled "the architect's intentions") in the realm of residential architecture without the help of the Japanese. In his Autobiography, Raymond testifies that from the moment he operated this shift in his mind, he literally rid the office of foreign staff to replace them by young Japanese architects:

> *"I took into my office new men that had a certain knowledge and respect for the old tradition and eliminated those that through their study in Europe or America were prejudiced against my experiment. I decided that if I wanted to take the role of the ancient carpenter and combine with the role of the seer[20] I must not only design, but also build everything myself. I recognized my outfit and I had architects and carpenters, carpenter estimators, construction engineers and mechanical engineers right in my office."*[21]

The young men were eager to be at the heart of the development of modern architecture in Japan.

In regards to Antonin Raymond's building practice, it is also important to stress the importance of the collaborative type of work organization between foreign and Japanese architects and builders since the very beginning of the modernization of building industry in Japan. In fact, observing the development of Antonin Raymond's own practice shows a gradual evolution towards this original form of collaborative pattern.

The deterioration of the political situation in Japan, which had taken a decisive turn with the February 26th 1936 incident[22] and the development of an anti-American feeling, considerably reduced the amount of work coming to Antonin Raymond's office[23]. Sugiyama testifies that several members of staff were sent to fight in the Manchoue War, never to return. He also recalls how he found himself to be in charge of the office after the Raymond's departure for India in 1938, before the outbreak of the war. All the commissions were connected to military equipment

2 A survey of the use of tatami and its impact on plan composition

2.1 Tatami as an element of study

From 1921, Antonin Raymond left Frank Lloyd Wright to open his own office in Tokyo. Between that time and the end of his first stay in Japan (1938), the Czech born architect would design no less than 66 houses, mostly in Tokyo and Karuizawa. These houses were designed for wealthy members of the foreign community residing in Tokyo and for members of the Japanese aristocracy, as well as political and business leaders. The problematic facing A. Raymond had two sides. On one hand he faced the needs of a changing Japanese society, eager to achieve modernization through westernization in all fields of everyday life, while nevertheless keeping strong bonds with some areas of its traditions. On the other hand, his western clients requested houses where they would be able to preserve a western way of life, despite the constraints imposed on construction methods and space organisation by the permanent risk of earthquake as well as by the summer heat and humidity. From 1935, Antonin Raymond started writing about his experience in Japan. His first writings[24] give an account of his discovery of traditional Japanese residential architecture. They testify of the strong impact this discovery had on the young architect and of his early intention to use it as an inspiration for his own design:

> "*I decided to study and try to find out what were the principles that guided this nation to arrive at such a perfect artistic expression of their national ideas, and of their life. […] what we call modern architecture is nothing but an effort to regain the lost knowledge of those principles, to re-establish the principles and to apply them to the new conditions dictated by the exigencies of the change in material*

civilization."[25]

We therefore understand that the need to combine Japanese and western elements in residential design was not only a response to practical issues, but also the result of an architectural ethic that Raymond started to develop at a very early stage in his career.

2.1.1 House type

The term 'Western style house' refers to a type of residence designed by Antonin Raymond between 1921 and 1937. These houses were designed for Japanese and western clients. Given the available documents, we have been able to create a data chart for 08 houses designed for western clients and 16 houses designed for Japanese clients for the purpose of this particular study.

The main characteristics of these 'western style houses' are the following. The houses are main residences, located in an urban environment, predominantly in Tokyo. The structure is either a wall and slab structure or column and beam structure, but in either interior space is divided by means of walls rather than sliding panels. The structure might combine several materials such as wood and stone or concrete, or it might be a reinforced concrete structure. Other common materials such as stucco and plaster are used to cover the exterior facades of the building. Stone is often used for the terraces and runs as a continuous strip at the base of the house. The openings are in the form of French doors and windows. However, in some cases, sliding doors and windows might also feature. The function of each room is fixed. Circulation space is designed in the form of halls and corridors. Bathrooms and kitchens are fixed with western style utilities, and may sometimes combine Japanese traditional cooking equipment. Roofs are not covered in Japanese traditional tiles and the eaves are not as deep as in Japanese residential architecture.

2.1.2 Number of tatami rooms

The 'number of rooms' in each house is based on the total number of main rooms, which include the following categories: living room, dining room, study, reception room, bedroom and staff room. Considering the particular topic of this section, these categories are considered as the living spaces that reflect the occupant's way of life in the private realm and in the eyes of society. In the corpus of 23 houses analysed, the minimum of tatami room is 1 per house (table 1).

	Total number of houses surveyed	Number of house with only 1 ta tami room
Western occupants	7	1
Japanese occupants	16	4

Table 1 Minimum of 1 tatami room

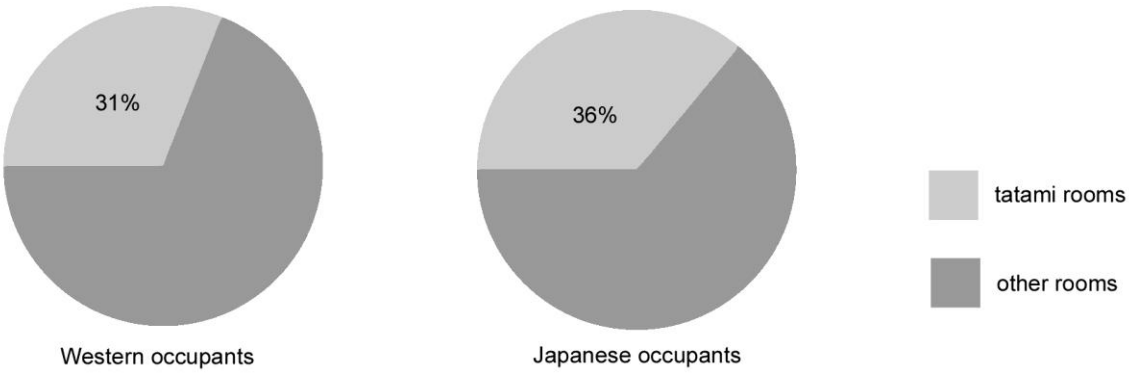

Table 2 Ratio of tatami rooms for main rooms of the house

Table 2 shows the ratio of tatami and other rooms for the total number of rooms in houses with western and Japanese occupants. We can see that tatami rooms are in minority compared to the types of rooms covered in other materials. Other materials used by the Antonin Raymond in main rooms are oak (オーク材), hinoki (ヒノキ), pine (マツ材), jinzoseki (じんぞせき), teak (チーク材), itawari (いたわり), tile and beimatsu (ベイマツ). Table 1 also shows that the ratio of tatami rooms is not significantly different in houses with Western or Japanese occupants. This means that the amount of space covered in tatami does not vary significantly between the two types of occupants. On one hand, the data indicates that although western clients commissioned the architect to design a western style house, parts of the house at least were evocative of the Japanese way of life. On the other hand, since the Japanese clients who approached Antonin Raymond for the design of their residence were eager to display signs of a westernized way of life, and used their living environment to convey this idea, there was an important decrease in the use of tatami. In terms of quantity, the above mentioned results show that A. Raymond was eager to include a traditional Japanese element in his residential design, while dealing with the practical issues of western style interiors.

2.1.3 Function

The following table shows the distribution of tatami rooms in terms of function. The rooms are divided in two categories: ‘staff rooms’ and ‘other rooms’. The category ‘staff rooms’ refers to the bedrooms occupied by maids, servants and other house staff. The category ‘main rooms’ refers to house owners bedrooms, guestrooms and Japanese reception rooms. These tatami rooms might in some cases display an alcove (床の間) or decorative shelves (棚).

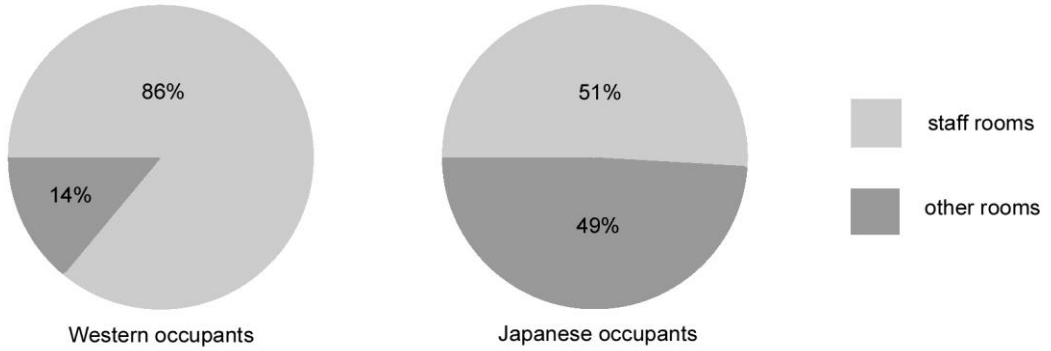

Table 3 Ratio of staff rooms and main rooms for tatami rooms

As table 3 indicates, there is a significant difference between houses occupied by Westerners and houses occupied by Japanese. Although the proportion of tatami rooms does not vary much between western and Japanese clients in terms of amount of space (table 2), the nature of the space covered in tatami mats shows significant difference. In the case of houses occupied by western families, the majority of tatami rooms are occupied by Japanese staff. Only a small amount of tatami rooms are also used by the western occupants themselves. In the case of Japanese occupants, the distribution between tatami rooms used by staff members and owners is approximately equal.

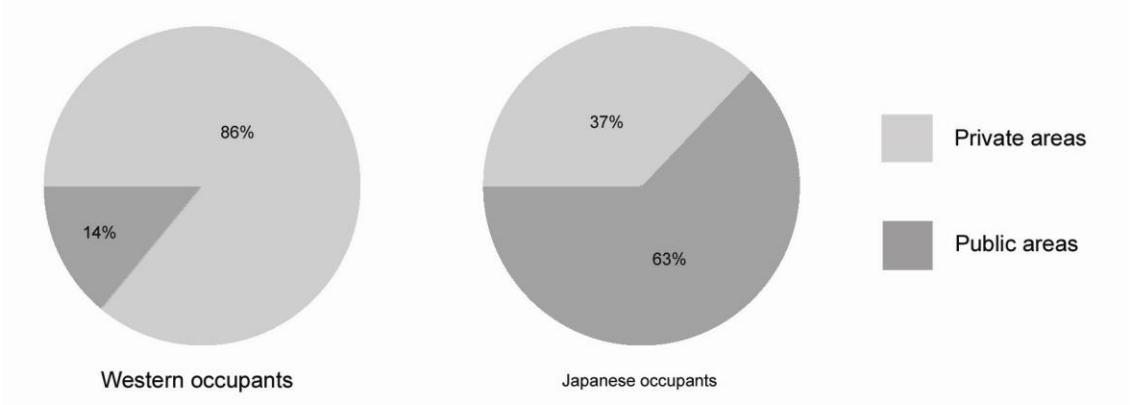

Table 4 Distribution of tatami rooms in terms of public and private space

Table 4 provides information of the difference between houses occupied by western owners and houses occupied by Japanese owners regarding the distribution of private areas and public areas for tatami rooms. Private areas are bedrooms for staff and occupants. Public areas are guest rooms, reception rooms and formal Japanese rooms. The table for 'western occupants' does not bare any difference with table 3, which means that in houses occupied by westerners, the majority of the tatami rooms belong to the private realm, that is to say bedrooms. However, in the case of Japanese occupants, table 3 and 4 show some difference in the distribution of private and public space. According to the previously mentioned list of rooms that qualify as 'main rooms' in the context of this particular survey, table 4 indicates that in the case of houses occupied by Japanese, the diversity of use of tatami rooms is increased compared to western occupants. Indeed, houses occupied by Japanese often have at least one tatami room used as a formal reception room. This room might in some cases feature an alcove and decorative shelves (table 5).

	Total number of houses surveyed	Number of houses with one or more Japanese room(s) in the public area category	Houses with at least one formal Japanese room with alcove (床の間), alcove and/or shelves (棚), and/or window desk (書院)
Western occupants	7	2	2 / 2 Russell house: 2 (床＋棚 / 書院) Gadsby house: 1 (床)
Japanese occupants	16	10	7 /10 Tanaka house: 1 (床) Hamao house: 3 (床 / 床＋棚 / 神棚) Akaboshi house: 1 (床＋棚) Sohma house 1: 2 (床 / 床) Hatoyama house A: 2 (床 / 床) Akaboshi house: 2 (床 / 床) Sohma house: 1 (床＋棚)

Table 5 Number of formal Japanese rooms

2.1.4 Size

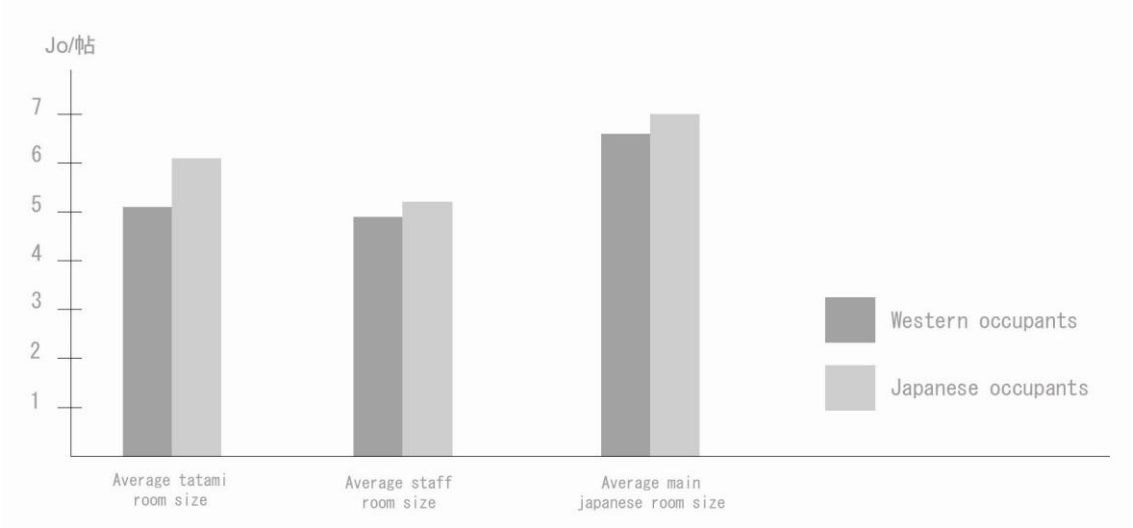

Table 6 Average tatami rooms sizes

Table 6 indicates the average size of tatami rooms. From a general point of view, tatami rooms are bigger in houses occupied by Japanese. The smallest rooms are staff rooms, with an average of 5.1 jō/帖 for houses occupied by westerners and 6.1 jō/帖 for houses occupied by Japanese. The average size of staff rooms is respectively 4.9 jō/帖 and 5.3 jō/帖 and the average size of main rooms is respectively 6.7 jō/帖 and 7 jō/帖. In any case, the size of the rooms according to each category does not vary significantly between houses occupied by Westerners and Japanese. Indeed, the size of Japanese rooms is based on traditional Japanese architecture set standards connected to the use and degree of formality of the room. Therefore, the fact that the rooms are included in a house occupied by Westerners or Japanese becomes a secondary factor.

2.2 Impact of tatami on plan composition

2.2.1 Measurement specifics

The first house mixing Western and Japanese space designed by Antonin Raymond was the Tanaka house in 1922 (Fig. 12). From the remaining drawings, it is possible to see that the plan design was based on a grid. According to the available documents, another example of design based on a grid is the plan for the Tetens house, designed two years later (Fig. 13).

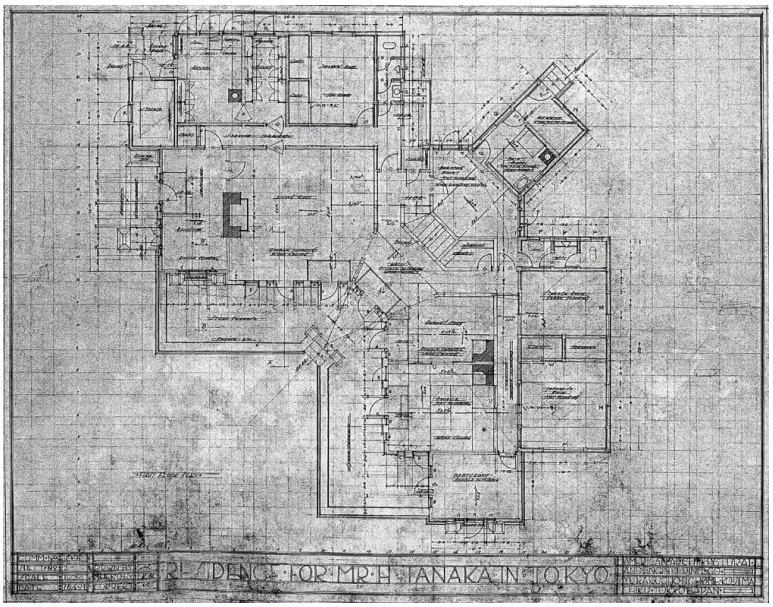

Fig. 12 Tanaka house (Tokyo, 1922)

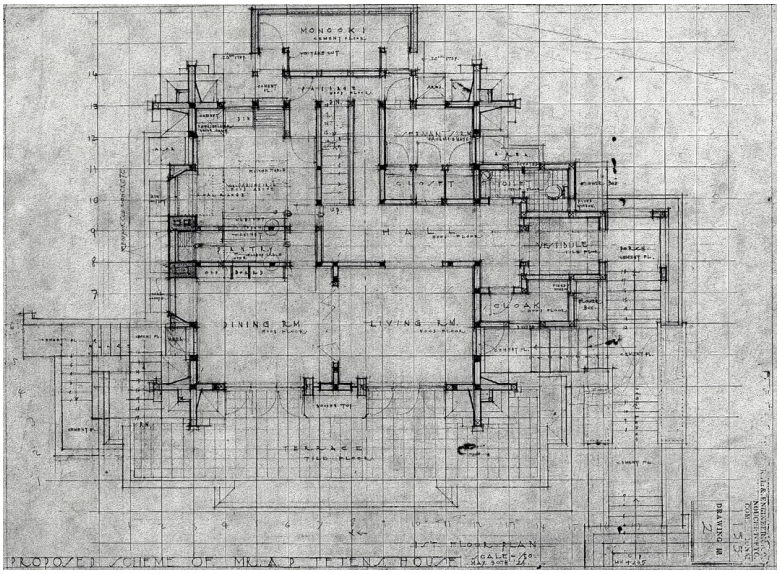

Fig. 13 Tetens house plan (Tokyo, 1924)

The architectural drawings show that the unit used for all measurements of the design is the Japanese traditional unit *shaku* (1 尺= 30.3cm), and areas are given in tsubo, the traditional Japanese unit for areas (1 坪 = 3.24m2 = area of 2 tatami). This is the case for all documents used for the purpose of this study. Furthermore, the grid is based on a 3 shaku square unit. Considering the fact that the standard size for one tatami is 3 by 6 shaku, the above mentioned characteristics indicate that Antonin Raymond used the tatami as a module for his plan composition. Consequently, we understand that Antonin Raymond was designing western style houses while using a

Japanese traditional way of design. It is one example of the way the architect operated a synthesis between western and traditional Japanese architecture.

2.2.2 Space division

In terms of space organisation and articulation, the use of tatami as basic module had an impact on the composition of the whole plan. It is clear from the study of room proportions, indicated by the measurements on the architectural drawings. The measurements of the main rooms, including rooms which did not include tatami are multiples of 3 (Fig. 14), therefore they are a multiple of the tatami measurement. The example of the Read house illustrates this particular point. The tatami width was also used for the corridors and stairways. In the case of Read house the only area that is not based on the tatami module is the entrance area. The architect sometimes skilfully used this type of area to switch between a Western and Japanese system of proportion when it was necessary.

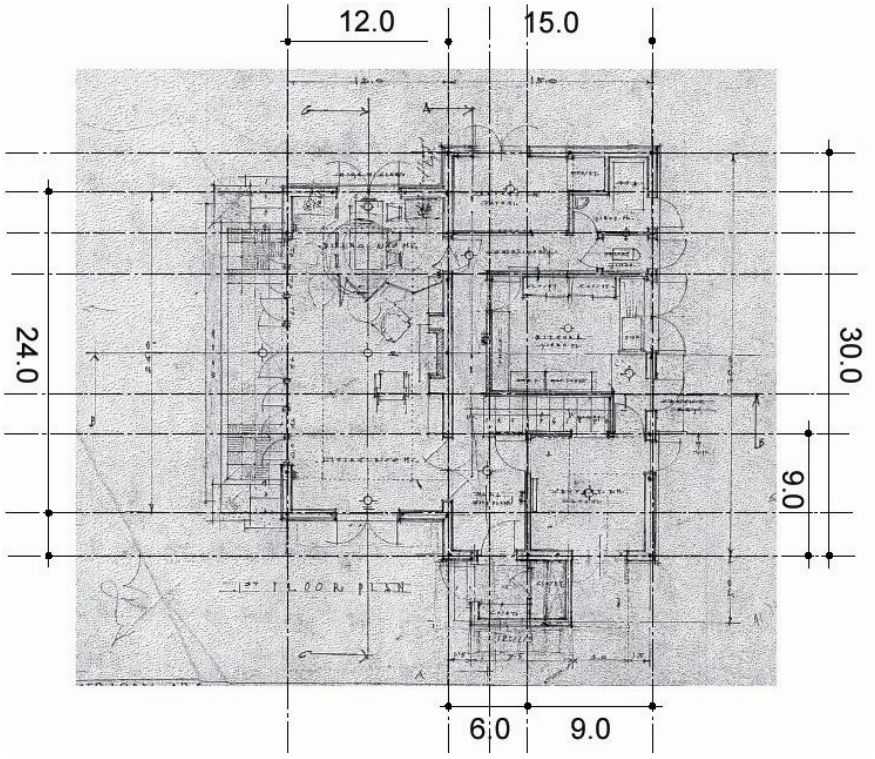

Fig. 14 Use of tatami module for Read house plan (Tokyo, 1924)

In terms of use, Tanaka house bears particular features that show the problems Antonin Raymond was faced with in his endeavour to combine western and Japanese space. The plan gives information on these problems, as for example the fact that each room opening onto the terrace features an individual genkan (entrance, 玄関). This

shows that the occupants of the house were still living according to Japanese ways although their house was a western style house. In later projects, this particular feature disappeared as living habits were gradually adapted to the use of western style rooms.

3 An Architectural analysis of Antonin Raymond's Karuizawa House

3.1 Introduction to Karuizawa house

Antonin Raymond's Karuizawa house is famous for the fact that it was inspired by Le Corbusier's unbuilt project for Errazuris house (Chile, 1930). Scholars in America and Japan have emphasized its importance in the course of modern Japanese residential architecture. Yet, the sources that deal with Karuizawa house tend to emphasise this aspect of the project over an objective observation and architectural analysis, consequently casting a shadow on the true nature of Karuizawa house and the architect's intentions. Furthermore, this approach reduces Karuizawa house to a mere by-product of Errazuris house. Le Corbusier's contribution is indeed invaluable, since it is at the base of the project in terms of plan and volume. Nevertheless, it should be considered as only one of many elements that pertained to the creation of Raymond's house.

Professor Fujimori pointed out that this project testified to the architect's intention to operate a clear break from the influence of his master Frank Lloyd Wright, and that it marked the beginning of a period dominated by Le Corbusier.[26] This is partly true if we consider the development of Antonin Raymond's architectural style in terms of form between his first project for the Tanaka house in 1921 and the series of houses he designed in the international style between 1933 and 1935. However, while Errazuris house was designed as a white monolithic bloc, Karuizawa house marked the beginning of Raymond's experimenting with wooden structure in the field of modern residential design,[27] a period which he himself qualified as *a new era in* [his] *design."*[28]

As Raymond stated, "*the plans were drawn in four weeks, the house put up in six, by carpenters deft, speedy and understanding.*" [29] The Czech born architect ingenuously turned to good account the particular context of Japan, by surrounding himself with a team of talented collaborators,[30] including a chief carpenter who had collaborated with him on the construction of the Italian embassy summer villa in Nikkō (1929). With this team, Raymond was able to take "*advantage of the wonderful ability of Japanese carpenters to work round lumber to perfection.*"[31]

Antonin Raymond himself has provided near to no information about the design[32] process of Karuizawa house for which no intermediary sketches remain either. Therefore, by focusing on an architectural analysis of his design, the present study

aims to bring forth the elements that came into its composition and the way they were combined. The study is carried out in terms of relationship with the surrounding environment, plan composition, structure, volume and materials.

3.2 Overall characteristics and composition

3.2.1 The idea behind the design

In 1935, sixteen years after his arrival in Japan, Raymond wrote the following words in the introduction to his first book:

> *"An architect working in Japan has the advantage of seeing materialized before him in Japanese architecture and civilization fundamental principles, the rediscovery of which is the goal of modern architecture. Occidentals, hampered as they are by deep-rooted materialism, have not yet realized these principles in all their purity, for this would demand a spiritual outlook. […] The problem of Function, Form and Matter with which we struggle ponderously is solved with incomparable ease for it is seen in its right perspective, the exteriorisation of an idea."*[33] (Raymond, 1935)

This "idea", which Raymond qualified as a "spiritual" or later as a "philosophical" idea referred to the inner purpose behind the design. It was through the observation of Japanese residential architecture that Raymond realised that this "idea" could be expressed through the principles of "*simplicity*", "*economy*", "*honesty*" and"*directness.*"[34]

Regarding his intentions for the design of Karuizawa house, Raymond wrote that it was "*to see what could be done if one did indeed seize the opportunity which was offered to build […] a structure exactly suited to the life [he and his wife Noémi] wished to live.*"[35]

These words echoed a statement made by Le Corbusier and quoted by Raymond in the same text: *"Modern architecture is a Way of Life*!"[36] The idea that modern residential architecture should be designed to suit the man of its time is, as we know, one of the fundamental principles advocated by the pioneers of modern architecture. Le Corbusier developed this particular idea in the introduction to the second edition of his manifesto book, *Towards a New Architecture* (1924, French edition).

3.2.2 Setting

When completed in the summer of 1933, Raymond's house stood isolated on a 1650 m^2 (500 *tsubo*)[37] open site, on the uplands of Karuizawa. It had a total flooring area of 197 m^2 and was set against a scenery of mountains, dominated by the imposing silhouette of Mount Asama, a volcano culminating at more than 2500 meters (Fig.15).

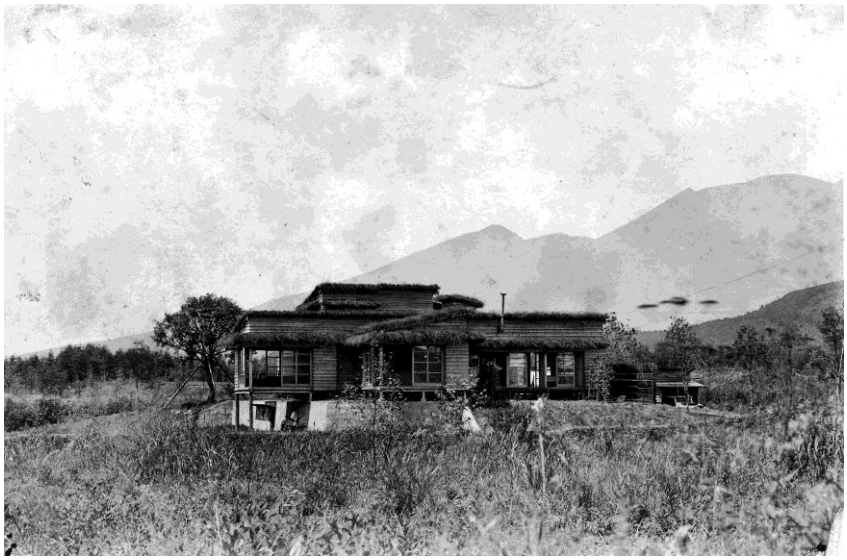

Fig. 15 Picture of Karuizawa house in its surroundings (south-east view, 1933)

While other houses were usually set in a more wooded area,[38] the positioning of Raymond's house in the middle of such an open and dramatic landscape placed a strong emphasis on the relationship between architecture and nature, and therefore between man and nature. Thereby, Raymond was responding to the "idea" that he had identified to be at the centre of Japanese residential architecture:

> *"The Japanese house resembles the evolution of a natural form. At every point it is related to an inner motive for which it had found an exact and fitting solution, not only practical but expressive of a profound understanding of the real values of life. […] Compared with the Japanese, our love for Nature is very superficial. For him, she is the very key to the secret of existence. […] He chooses materials which speak for her. Wood in its natural state, straw under foot, and sand on the walls."*[39] (Raymond, 1935)

The house was supported by a series of short posts standing on concrete foundations slightly emerging from the ground. This was an adaptation of the Japanese traditional foundation system, where the stones traditionally used were replaced by rationally designed concrete blocks. The space between the posts below floor level was left open throughout the entire house, a feature seldom found in Japanese traditional residential architecture. It enabled better ventilation of the building during hot and humid summers, and visually created an effect of lightness.

The house stood upon an area of elevated ground which had been created artificially with the soil extracted slightly south of the house in order to make a pond.[40] In terms of function, the level difference would allow better drainage of the ground around the house, the pond acting as a reservoir where water could be directed to. It

also contributed to the general visual lightness of the house, an effect further emphasized by the overhanging room (B2) supported by two thin Japanese cedar (杉) posts.

The Katsura Imperial Villa is mentioned on several occasions in Raymond's essays, as one of the finest examples of Japanese architecture.[41] Although the architect did not make any reference to this particular aspect of the project in writing, a comparison of both plans shows that Raymond was obviously inspired by the Imperial Villa in regards to the positioning of the pond and the elevation of the building. Furthermore, we know that the main building in Katsura Imperial Villa was also elevated to prevent any risk of flooding.

The elevated area was sustained on the south and east sides by a concrete wall approximately 6 *shaku* high (182cm).[42] The roughness of the natural finish concrete recalled the rusticity of sustaining stone walls found in the countryside. For Raymond, concrete provided a simple and economical way to solve a technical issue, and he had experienced with this medium during the construction of his own house (Reinanzaka, 1923). Furthermore, the architect did not only believe in the use of concrete for its technical qualities, but also for its aesthetic qualities:

> "*The reasons for natural finished concrete are both practical and aesthetic. […] From the aesthetic point of view […] Naturalness is more beautiful than artificiality. Simplicity and clarity are more beautiful than complexity. Economy is more beautiful than wastefulness both of spaces and materials and all those aesthetic qualities must stem from the functions of the structure both practical and aesthetical*."[43] (Raymond, 1961)

The raising of the ground level resulted in the raising of the eye line level, which meant that a person standing in almost any room of the house could embrace the surrounding landscape as far as the eye could see. This was due to the shape of the plan and to the presence of numerous removable glass doors which not only allowed a view from the house but also through the house from outside (Fig. 15). It was therefore completely permeable to its surrounding landscape, a permeability mentioned by Raymond regarding Japanese residential architecture:

> "*The garden and the house are one whole. The garden enters into the house and the house creeps through the garden as a snake in the grass. The cube style of house set on the ground in the western manner is impossible here*."[44] (Raymond, 1935)

In his PhD dissertation, Ken Tadashi Oshima points out the openness that characterised the relationship established by Raymond between his house and the surrounding landscape, in contrast to the approach of his contemporary Horiguchi

Sutemi in the design for Shiensō (1926). Horiguchi adopted a "*micro-cosmic view on the natural world through a small, filtered round window off the living room*",[45] while "*Raymond's house opened out onto an expansive view of the entire Karuizawa mountain valley.*"[46]

The same distinction is established between the two architects' approaches regarding to the use of the pool. In the case of Karuizawa house, it did not only serve as a "mirror" of nature but was designed deep enough that it could become a real pool on hot summer days.[47]

Raymond's writings testify to his own love of nature and that for him "*closeness to nature too (was) an important principle of architecture*."[48] The differences between the Western architect's approach and that of his Japanese peer interestingly reveal the cultural difference between two expressions of a common sense of connection with nature. The former was one of embracement while the latter was one of contemplation, but both designs nevertheless revealed a common concern for the necessity to express the relationship between man and nature through architecture.

3.2.3 Plan

In his autobiography, Raymond mentioned that his adaptation of Le Corbusier's project was limited to the living room.[49] However, comparing both plans shows that the "L" shaped part of the plan was also a source of inspiration (Fig. 16). The placement of the kitchen is similar, even if the outdoor circulation has been brought indoors, and the idea of the recess was used to place the pool at the centre of the plan.

Despite the fact that the house was designed for summer, Raymond kept the idea of a fire place. Built in concrete, the fireplace would create a warm atmosphere on cool evenings and become the centre of family life. It was no doubt designed in the spirit of the sunken hearth (囲炉裏) found in *minka*, and also recalled the fire place always present at the heart of Frank Lloyd Wright's houses, which Raymond would have experienced himself during his stay at Taliesin (May-Dec. 1916).

The right hand side of Karuizawa house plan formed a four branch "cross" that included three bedrooms (B1, B2 and B3), storage (S), a bathroom (Bth) and a maid's room (M). The use of *tatami* mats in this area was a direct reference to Japanese residential architecture and way of life.

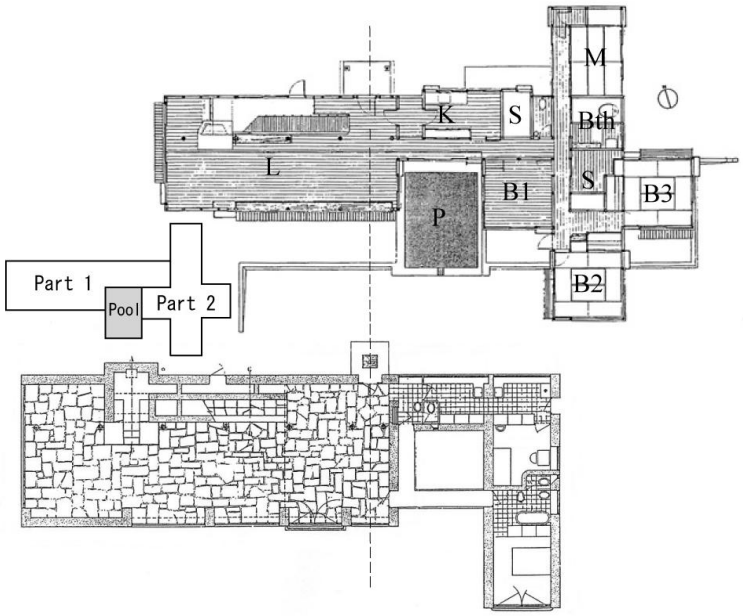

Fig. 16 Plans of Karuizawa house (above) and Errazuris house (below) 1/500.

As mentioned earlier, importance of view and effective ventilation are two qualities that characterised Karuizawa house. These are in fact the two main qualities of the diagonal type of plan found in *sukiya* architecture, a type of plan which "*permits a view from all sides and assures maximum ventilation in the oppressive heat of the Japanese summer*."[50] As one of the finest examples of *sukiya* architecture, Katsura Imperial Villa features the diagonal plan and consequent "step" effect which allows a variety of views. This feature is also present in the plan of Karuizawa house (Fig. 17).

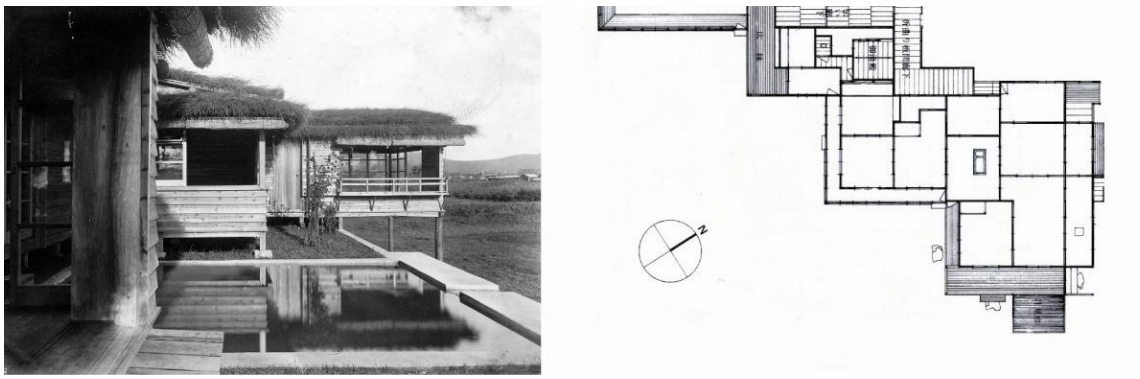

Fig. 17 The "step" effect in Katsura Imperial Villa and Karuizawa house plans.

In terms of form, it is however important to say that there are no perfect "cross" plans in *sukiya*, since symmetry is strictly avoided.[51] The symmetry of the "cross" plan (Fig. 16) found in Karuizawa house, added to the fact that Raymond spent several years working with Frank Lloyd Wright, leads to think that he was also inspired by the "cross" type plan that Wright had started to use as early as 1898.[52] Furthermore, we know that Japan also played a crucial role in Wright's architectural development and that he was the connecting agent between Raymond and Japan.

For the orientation of the plan, Raymond followed the rules of Japanese traditional residential architecture, which he understood as the following:

> *"All living rooms are facing south or southeast, where sun shines in the winter time and prevailing winds come from in the summer time; that the toilet are in the northwest corner, that no habitable rooms face north or west; and therefore the entrance is of necessity from the north side."*[53] (Raymond, 1938)

In terms of composition, the pool acted as a connection and transition agent between the two parts of the plan. It also created a physical and visual connection between the house and the surrounding grounds through the overflow system that allowed any excess water to run along a narrow stream that led to the pond.

Another detail that contributed to the smooth transition between the two parts of the plan was the flooring in bedroom B1, which was not covered with *tatami*. This meant that while belonging to part 2 in terms of form and size, room B1 belonged to part 1 of the plan in terms of treatment, therefore establishing the transition between part 1 and 2 (Fig. 16).

3.2.4 Volumes and proportions

The proportions for the rooms located in part 2 of the plan can easily be attributed to the use of *tatami* if we consider the size of the standard *tatami*, which is 3 x 6 *shaku*. The fact that the measurements which appear on the original foundation plan are given in *shaku* and are mostly multiples of 3 also confirms this idea. By placing a grid based on a 3 by 3 *shaku* module, we can see that the *tatami* was the base module for the overall plan of Karuizawa house (Fig. 18), even in part 1, which had a wooden floor. This shows how Raymond adapted Le Corbusier's plan to a Japanese traditional proportion system.

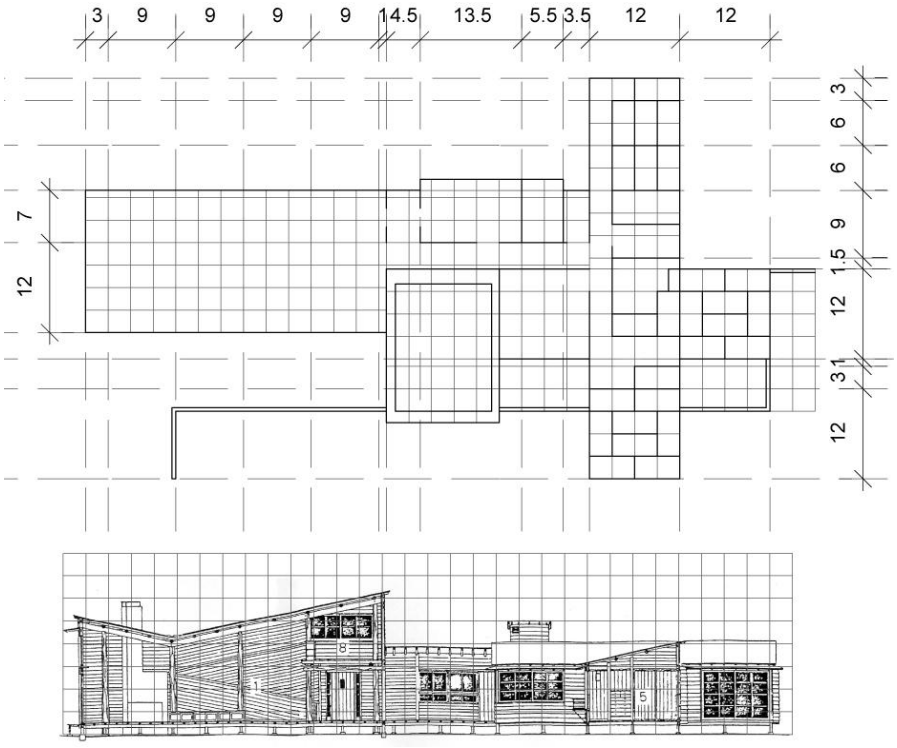

Fig. 18 Grid showing the proportion system based on the tatami module

According to the principles of *sukiya* architecture, the *tatami* module determines the dimensions of the building not only in plan, but also in elevation.[54] The comparison of the sections for the living room in Raymond and Le Corbusier's designs shows that the height of the lowest point of the ceiling in Karuizawa house is exactly based on the one found in Errazuris house. But on the other hand, overlapping the *tatami* module grid over the section of Karuizawa house shows that the height of both ends (East and West) of the room is directly connected to the proportion system based on the *tatami* (Fig. 18). It also shows that the proportions of the "cross" part of the plan is also based on the same proportion system.

Bedroom B2 presents a feature that should be emphasized if we consider the particular influence of Katsura Imperial Villa. Its window sill and handrail presents a special character compared to the rest of the house. We can see that the window sill designed by Raymond recalls that of the *koshoin* 古書院 of Katsura Imperial Villa (Fig. 19). However, the lines have been simplified in accordance with the principles of "economy" and "simplicity" advocated by Antonin Raymond.

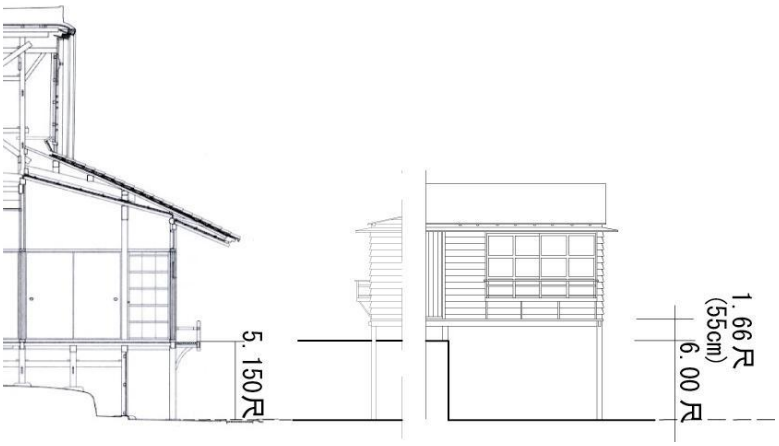

Fig. 19 The *koshoin* 古書院 of Katsura Imperial Villa and the bedroom of Karuizawa house

These observations have revealed that several details found either in Raymond's house or in his way of design were directly inspired by *sukiya* architecture. However, there are two major elements of *sukiya* architecture and more generally of Japanese traditional architecture that do not appear in Karuizawa house, that is, the deep overhanging eaves and verandas.

One of the comments made by Raymond about the aspect of Karuizawa house was in fact the following:

> "*It has a very strong Japanese flavour, although it does not adopt any traditional Japanese forms*."[55] (Raymond, 1973)

This important statement made by the architect emphasises the fact that while he acknowledged the influence of Japanese architecture on his design, his intention was not to create a "Japanese" house in terms of architectural form.

The house however featured the smallest and narrowest type of exposed veranda found in Japanese traditional residential architecture, which is called *nure-en* 濡縁[56] and found in some modest types of *minka* (Fig. 16). The *nure-en*, which was only half a *tatami* deep (1.5 *shaku*), provided Raymond with the qualities of the veranda without interfering with the clarity of the volume borrowed from Le Corbusier's project.

Now, we can understand that although Karuizawa house included several references to Japanese traditional architecture in terms of way of design, materials, and details such as the *tatami*, the window sill of the bedroom (B2), the glass removable doors and windows, and the veranda, Raymond did not borrow elements that would have contradicted his initial purpose of designing a modern building.

If we consider that the deep overhanging eaves and verandas in Japanese traditional architecture play a crucial part in its visual lightness, it is now possible to fully grasp the importance of the exposed foundations, the elevated ground, the openings of the

house and the overhanging volume of the bedroom (B2), which compensate for the absence of the two traditional features.

3.3 Structure and materials

3.3.1 Structure

As mentioned earlier, the main volume of Raymond's project was adapted from Le Corbusier's Errazuris house, which itself was an adaptation of the Citrohan house prototype designed by the French architect in 1920.[57] It combined two masonry bearing walls with a wooden roof truss (屋根のトラス). Raymond had no trouble replacing the masonry bearing walls with wooden posts (Fig. 16), used throughout Karuizawa house. The ease with which Raymond was able to adapt Errazuris house's system, added to the promotion of the post and beam system and the *piloti* by Le Corbusier, emphasizes the tenuousness of the boundary between Western modern architecture and Japanese traditional architecture in terms of structural system.

On the drawings of Karuizawa house, the living room's main posts are approximately 20cm thick.[58] The secondary posts are approximately 15cm thick in the living room and throughout the house. In *Sukiya* architecture, the average thickness of posts is 12cm,[59] which is the case in Katsura Imperial Villa (0.400 *shaku*).[60] In *minka* architecture, the posts range from approximately 10 to 12cm,[61] except for the *daikoku bashira* 大黒柱, the main pillar of the house which has a much wider section than other posts. The posts in Karuizawa house are therefore closer in dimension to those of the *minka*. On the other hand, the exposed rafters and the refinement of the overall structure created an echo to the simple elegance of *sukiya*.

Regarding the assembling of the main beams and posts, Raymond used the same system as the one that appeared on Le Corbusier's drawings,[62] which he adapted to round lumber. It involved splitting the beam in two halves lengthwise, and inserting the post between the two halves, which were fixed together by means of a transversal metal screw. Compared to the elaborate and time consuming tenon and mortise system traditionally used in Japanese architecture, this technique provided the architect with another means to achieve "economy" and "simplicity".

3.3.2 Materials and surface treatment

In his writings, Raymond gives details about some of the materials used in Karuizawa house and the way in which they were used:

> *"The aggregate for concrete retaining walls and other concrete parts of the building was the lava stone dug up from the ground."*[63] (Raymond, 1973)
>
> *"The bearing columns were the grey trunks of chestnut (クリの木), the roof an*

interplay of poles of hinoki (ヒノキ), the walls and planks of natural cedar (杉), *the tin roofing was laid over with a thatch of larch twigs* (唐松)*.*"[64] (Raymond, 1940)

Raymond used materials available in the vicinity of Karuizawa as part of his effort to achieve "naturalness" and "economy". In this aspect, he was directly inspired by *minka* architecture which also uses natural materials found locally.[65] Traditionally, the inhabitants of *minka* were only allowed to use cheap materials which were generally varieties of pine and chestnut.[66] In Karuizawa house, Raymond used chestnut, *hinoki* and also Japanese cedar (杉), a fine grain wood often used in *sukiya* architecture.

Economy was not only achieved through the use of local materials, but also by using them in the simplest possible form:

"*Both columns and beams are round lumber. The outer bark was stripped and the lumber was polished by rubbing it with straw and sand, and left in its natural state.*"[67] (Raymond, 1973)

This way of treating wooden structural elements is also typical of *minka* architecture[68] and in some cases in the less refined examples of tea house architecture, at the origin of *sukiya*. The fact that the posts were used in their round shape is however particular to Karuizawa house.

The original pictures show that the posts located at the corner of the bedrooms B2 and B3 were squared. This could have been an attempt to give more refinement to those rooms as well as to provide a good support for the sliding window frames, something not easily achieved with round lumber. In Japanese traditional architecture, posts were usually cut to a square shape more or less refined depending on whether they were aimed for *minka* or *sukiya* architecture.

The roof was covered with larch twigs, in echo to the thatched roofs of the *minka*, but also as a means to muffle the noise caused by heavy rainfalls on the metal roof[69] and of protection against heat. Unfortunately however, this device became a source of damage to the metal roof and had to be removed within the two years following the completion of the house.

Traditionally in Japan, the nature of materials and the way they were finished was strictly codified according to class hierarchy. Raymond's concern, however, was not to design according to traditional codes, but rather to design a "modern", "simple" and "economical" house in the context of Japan. Being his own client[70] meant that the architect was free to experiment and that he could take the liberty of combining the refinement of *sukiya* with the rusticity of *minka*, or to adapt a Western modern architectural form to a Japanese way of design.

Raymond's comments about the house provide us with an important clue regarding

the way he wished the house to be considered. The vocabulary he used emphasised above all the "simplicity" and the "rusticity" of Karuizawa house. He compared it to vernacular buildings in terms of design but also in terms of use, thereby admitting and affirming his allegiance to the most popular and modest types of architecture, which in Japan is embodied in *minka* :

> "*The roof was like a huge tent in the shelter of which we moved, worked, lived. Bare ? Yes, bare as a barn.*"[71] (Raymond, 1940)
>
> "*When reed exterior curtains were let down, the whole thing was like a primitive African chieftain's quarters, even the furniture was made from left-over lumber by the carpenters on the job.*"[72] (Raymond, 1973)

Antonin Raymond's writings also reveal the challenge brought by his dealing simultaneously with *sukiya* and *minka*, as can be understood from these two seemingly contradictive comments made the same year:

> *"The best example of collaboration between the tea master and the carpenter is perhaps the Katsura Palace in Kyoto."*[73] (Raymond, 1953)
>
> *"Japanese architecture has two forms in general. One is the pure Japanese style, and the other is one influenced by China or Buddhism. The typical examples of the former are the farm house and the Katsura Rikyu […] I think, however, a sign of degeneration is already seen in Katsura Rikyu. It is beautiful, but it is lacking in strength."*[74] (Raymond, 1953*)

Raymond prayed the refinement of Katsura Imperial Villa, but at the same time established limits to its qualities in favour of the *minka*, by bringing forth an argument of purity and strength.

3.3.3 Space

Raymond refers to the quality of space in the main living room, saying:

> *"We were not in a room; we were in a space, defined by fine construction. In modern architecture the construction is the only decoration."*[75] (Raymond, 1940)

Beyond the influence of Japanese traditional architecture, these words also testify to Raymond's desire to take part in the movement initiated by the pioneers of Western modern architecture, who defended the idea that construction should be considered not only for its technical qualities but as a means to create beautiful architecture. This was the case of Le Corbusier, who defended this idea in his "manifesto" and of Auguste Perret who said:

> *"He who conceals any part of the truss deprives himself of the only legitimate and most beautiful ornament of architecture."*[76] (Perret, undated).

Raymond acknowledged receiving influence of Perret through Bedřich Feurstein,

particularly at the time of their collaboration on the project for Raymond's Reinanzaka house in Tokyo.[77] In Karuizawa house, beauty and impression of space were achieved through simplicity and ingenuity of construction.

The wooden structure of Karuizawa house is one of the best examples of the way Raymond put construction at the service of beauty. But, for another example, we may look at the particular detail of the lintel of the main sliding doors in the living room.

In Errazuris house, Le Corbusier designed large windows made of a single glass sheet supported by a steel frame fixed onto the masonry.[78] These wide windows were meant to enable the best possible view over the landscape. However, the architect's drawings also reveal that the view would have been considerably obstructed by the large masonry pillars, therefore diminishing the impression of space.

In Karuizawa house, Raymond designed a lintel that would allow the sliding doors to be independent of the structure, consequently allowing the room to be completely open onto the outside when sliding glass doors were removed and stored away. The lightness of the wooden structure, added to the absence of wide verandas meant that the house practically became a veranda itself.

The drawings and pictures of Karuizawa house show that Raymond designed the walls so as to let the posts protrude slightly on the inside, while concealing them on the outside. Through this choice of treatment of the building's inner and outer skin, the architect was assuring the clarity of construction while at the same time keeping an emphasis on the overall clarity and simplicity of form, thereby paying tribute to Le Corbusier's adage: *"Primary forms are beautiful forms because they can be clearly appreciated."*[79] (Le Corbusier, 1923)

This was achieved by means of a continuous skin made of a series of cedar planks which slightly overlapped each other, as found in the local wooden houses erected by the first Western residents of Karuizawa. One can imagine that the overall appearance of the house would have been very different, had the entire structure been revealed on the exterior side of the walls, as in Japanese traditional architecture. In his design, Raymond was careful to preserve the integrity and symbolic power of the form he had borrowed from Le Corbusier, or to use the French architect's own words, to preserve "*the decisive eloquence of the architectural volume*."[80]

Conclusion

The study of the use of *tatami* in Antonin Raymond's residential designs has provided information regarding the architect's way of design and some information about the importance of the *tatami* as a longlasting symbol of Japanese traditional way of life at the time of the architect's activity. In Raymond's residential design, on one

hand the *tatami* is used as a tool for plan composition. On the other hand, it also creates a challenge for the architect in regards to the combination of western and Japanese space. In the perspective of the study of the synthesis of western and Japanese architecture that Raymond endeavoured to achieve during his career, the use of *tatami* as plan composition module is one of the main keys to the understanding of the architect's way of design.

The architectural analysis of Karuizawa house has shown that Karuizawa house resulted from a complex and intricate combination of Japanese *sukiya* and *minka* architecture, with Western modern forms in terms of volume and plan. The *tatami* module provided unity to the plan and elevations in terms of proportion, a unity emphasized by the use of natural materials and a wooden structure, in respect for Japanese building tradition. Karuizawa house should be emphasised as the perfect synthesis of what Raymond had learned about architecture until 1933. His work with Frank Lloyd Wright, his study of Japanese architecture and the influence he received from Perret and Le Corbusier through his collaborators. Karuizawa house stood as the product of a true synthesis between Japanese traditional architecture and Western modern architecture, thereby reassessing their common grounds and compatibility. His design testifies for his allegiance to Japanese traditional types of architecture while his borrowing of Le Corbusier's scheme was a strong and clear statement of his intention to be a modern architect and to b considered as a member of the modern movement. In Karuizawa house, more than in any other design, Raymond demonstrated with genius his ability to operate such a synthesis by finding the right balance in the combination of refinement and rusticity, artistic creation and construction, consequently making a statement about his personal architectural identity. In this sense, he was able to make himself worth of what he often described as the "true architect", that is, an "artist" and a "builder"

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List of houses analysed for the study of the use of tatami in pre war private residences:

Tanaka house (1922), Tokyo / 田中邸
Fukui house (1922), Tokyo / 福井邸
Read house (1924), Tokyo / リード邸
Tetens house (1924), Tokyo / テテンス邸
Hagiwara house (1925), Tokyo / 萩原邸
Reischauer house (1926), Tokyo / ライシャワー邸
Russell house (1927), Tokyo / ラッセル邸
Inoue house (1927), Tokyo / 井上邸
Hamao house (1927), Tokyo / 浜尾邸
Stapleton (1927), Tokyo / ステイプルトン邸
Gadsby house (1928), Tokyo / ガッドスビ邸
Akaboshi house (1932), Tokyo / 赤星邸

Sohma house 1 (1932), Tokyo / 相馬邸
Okada house (1932), Tokyo / 岡田邸
Izumi house (1933), Tokyo / 今泉邸
Hatoyama house A & B (1933), Tokyo / 鳩山邸
Kawasaki house (1934), Tokyo / 川崎邸
Asano house (1934?), Tokyo / 浅野邸
Akaboshi house (1934), Tokyo / 赤星邸
Sohma house 2 (1934), Tokyo / 相馬邸
Oka house (1936), Tokyo / 岡低
Keller house (1937), Tokyo / ケラー邸

[1] Discussions on the nature of these professions, among which painters, potters, wood block artists and sculptors are compiled in the following book: M. Takeuchi, *The Artist as Professional in Japan*, Stanford, Calif.: Stanford Univ. Press, 2004.

[2] Op. cit. Reynolds, p. 187.

[3] See J. M. Reynolds in M. Takeuchi (ed.) The artist as professional in Japan, Stanford, Calif.: Stanford University Press, 2004, p. 183.

[4] D. Buntrock, Japanese Architecture as a Collaborative Process. Opportunities in a flexible construction culture, London and New York: Spon Press, 2002, p. 17.

[5] Vories was a Christian missionary who arrived in Japan in 1905 and opened an architectural office in 1908. Since he was not himself a qualified architect, he hired young American architects to create designs for his clients. He was with Antonin Raymond the foreign architect who spent the most time in Japan.

[6] M. Sugiyama, "Watashi no omoide" 私の思い出, *Kenchiku* (建築), Oct. 1961, pp. 47-48.

[7] Masanori is the employee who worked the longest with Antonin Raymond, form 1921.

[8] Chronological table (年表), *Kenchiku* (建築), Oct. 1961, p. 111.

[9] Raymond became a member of the Tokyo Club in 1921, through the recommendation of Frank Shey, the president of the American Trading Company. He also joined the Tokyo Tennis Club the same year.

[10] See *Database* chart for a more detailed list of employees

[11] Ibid, *Kenchiku* (建築), Oct. 1961

[12] "Remondo jimusho no omoide" (レーモンド事務所の思い出/杉山雅則氏に聞く / 昭和初期モダニスト回顧録 / 特集: 昭和初期モダニズム、建築家土浦亀城と彼をめぐる人々, Space Design No. 286, July, 1988, pp. 41-43.

[13] MAEKAWA K. "Remondo no koto" (レーモンドのこと), *Kenchiku* (建築), Oct. 1961, pp. 46-47.

[14] Kunio Maekawa worked in Le Corbusier's office from 1928 to 1930.

[15] See *Database* chart for a more detailed list of employees.

[16] After the 1923 Great Kanto Earthquake, Raymond went to China where he visited Peking and Shanghai.

[17] See next section for more details on this point.

[18] Space Design No. 286, July, 1988, p. 21

[19] The Czech Jan Švagr joined Raymond's office in 1923, and collaborated on the

project of the St Luke's hospital.

[20] Raymond here refers to a practice commonly spread in Japan at the time, of consulting a seer who mastered the science of *kimon* (鬼門). His role is to determine the unlucky directions and to advise the client and builder accordingly as how to avoid bad luck by orientating the house and its main rooms in accordance to certain protective rules. Most of Raymond's Japanese clients demanded that a seer be consulted prior to the design of their house.

[21] A, Raymond, "Experienced Stories Before 1938 in Japan" (Lecture at the Architectural League of New York), 1938, in *Lectures and Articles*, Antonin Raymond's papers, courtesy of Koichi Kitazawa, Karuizawa.

[22] On the 26th of February 1936.

[23] Antonin Raymond testifies of this feeling in a short autobiography: "*There was in th e air a strong anti-American atmosphere and a growing regard for the Axis. We had a g reat difficulty in getting new work*." in *Kenchiku*, Oct. 1961, p. 21.

[24] A. Raymond, "An Architect's Experiences in Designing Modern Residences for Japan", 1935, LAARK.

A. Raymond, "Experienced Stories before 1938 in Japan", 1938, LAARK.

[25] A. Raymond, "An Architect's Experiences in Designing Modern Residences for Jap an", 1935, LAARK.

[26] T. Fujimori, *Showa jutaku monogatari: shoki modanizumu kara posutomodan made 23 no sumai to kenchikuka* 藤森照信：昭和住宅物語：初期モダニズムからポストモダンまで23の住まいと建築家，東京：新建築社, pp. 133, 1990.

[27] Before, Raymond had worked with the stucco covered wooden frame, brick, oya stone and had started experimenting with raw finish reinforced concrete on the projects for his own house in Tokyo (1923) and the Tetens house (1924).

[28] A. Raymond, *An Autobiography*, Rutland, Vt.: Charles E. Tuttle, pp. 130, 1973; Japanese: 自伝アントニン・レーモンド，東京：三一書房，p. 117，1970. The work with wood had been initiated in earlier years with designs such as the villa for the Italian Embassy in Nikkō (1929) and a villa for Akaboshi Shiro which included a thatched roof (1931).

[29] A. Raymond, "Towards True Modernism", p. 13, 1940, LAARK. Japanese: 「真のモダニズムに向って」，A. レーモンド(三沢浩訳)：私と日本建築，鹿島研究所出版会, p. 88, 1967.

[30] Sugiyama Masanori (杉山雅則), was in charge of the design, Takagi Kenji (高木健次) in charge of the building site. The chief carpenter was Akasaka Tokichi (赤坂藤吉).

[31] A. Raymond, *ibid*., p.130, 1973. Japanese: *ibid*, p. 117, 1970.

[32] See A. Raymond, *ibid*., LAARK, p. 12-13, 1940 . Japanese: *ibid*, pp. 88-89, 1967. See also: A. Raymond, *ibid*., pp. 130-134, 1973. Japanese: *ibid*, pp. 88-89, 1970.

[33] A. Raymond, "An Architect's experience in designing modern residences for Japan", LAARK, pp. 1- 2, 1935. Japanese:「日本建築について」，三沢浩沢, *ibid*., pp. 12-13, 1967. Book's reference: *Antonin Raymond: his work in Japan 1920-1935*, preface by Elie Faure and an article by Antonin and Noémi P. Raymond, Tokyo: Jonan Shoin, 1936, 104 p.

[34] A. Raymond, "Lasting Values in Design", LAARK, pp. 7-11, 1949. Japanese: 「デ

ザインにおける永遠の価値」， 三沢浩訳, *ibid*., pp. 156-161, 1967.

[35] A. Raymond, *ibid*., p. 12, 1940. Japanese: *ibid*., p. 88, 1967.

[36] A. Raymond, *ibid*., p. 1, 1940. Japanese: *ibid*., p. 66, 1967.

[37] Originally given in *tsubo*, 1坪= 3. 306 m^2.

[38] This was the case for three other summer cottages designed by Raymond and built around that time in Karuizawa: Kodera house (1934) Oka house (1934) and Walker house (1935).

[39] A. Raymond, *ibid*., pp. 1- 2, 1935. Japanese: *ibid*., pp. 12-13, 1967.

[40] K. Ichiura, "Reemondo shi Karuizawa bettei", *Shinkenchiku*, 一浦健：レーモンド氏輕井澤別邸, 新建築, Vol. 9, p.185, 1933. 10).

[41] A. Raymond, "Principles in Japanese Architecture", LAARK, p. 13, 1940*; "Creation and Imitation in Japanese Architecture", LAARK, p. 5, 1953; "Basic Principles in Architecture", LAARK, p. 2, 1953*. Japanese: 三沢浩訳, 「日本建築の原則」， *ibid*., p. 62, 1967;「日本建築の精神」, *ibid*., p. 171, 1967; 「建築の根本原則」, *ibid*., p. 181, 1967.

[42] In his book *Antonin Reemondo no jūtaku monogatari* , Hiroshi Mizawa mentions that the wall is between 1.5 and 2 meters high, and says that measurements were not given in shaku, as Raymond usually did (*ibid*, p 136). But the foundation plan obtained from Antonin Raymond's office shows measurements in *shaku* from which the height of the wall can be deduced as approximately 6 *shaku*. 1尺= 30.3 cm. Numbers are evened to the closest higher number, 181.8 cm= 182cm.

[43] A. Raymond, "Natural Concrete Finish and Reasons for its Development", LAARK, p. 4, 1961. Japanese: 「打放しコンクリートについて」， 三沢浩訳, *ibid*., p. 194, 1967.

[44] A. Raymond, *ibid*., p.8, 1935. Japanese: *ibid*, p. 23, 1967.

[45] K. T. Oshima, *Constructed Natures of Modern Architecture in Japan, 1920-1940: Yamada Mamoru, Horiguchi Sutemi and Antonin Raymond*, PhD thesis, New York: Columbia University, p. 227, 2003.

[46] K. T. Oshima, *ibid*.

[47] D. B. Stewart mentioned that the pool was inserted in the place of a well that had been previously sunk for washing and drinking. See Stewart, *ibid*., p. 134.

[48] A. Raymond, *ibid*., p. 4, 1953*. Japanese: *ibid*., p. 182, 1967.

[49] A. Raymond, *ibid*., p.130, 1973. Japanese: *ibid*., p. 117, 1970.

[50] T. Itoh, *The Elegant Japanese House: traditional Sukiya architecture*, Tokyo: Weatherhill, Tankosha, p.72, 1969.

[51] T. Itoh, *ibid*., p. 80.

[52] Examples: House for Isabel Roberts (1907); three houses for Honoré Jaxon (1914); House for E.D. Brigham (1915).

[53] A. Raymond, "Experienced Stories before 1938 in Japan", LAARK, p. 6, 1938. Japanese: 「一八年間の日本生活」， 三沢浩訳, *ibid*., pp. 31-32, 1967.

[54] T. Itoh, *ibid*., p. 80.

[55] A. Raymond, *ibid*., p.130, 1973. Japanese: *ibid*., p. 117, 1970.

[56] C. Kawashima, *Minka, traditional Houses of Rural Japan*, trans. by L. E. Riggs, Tokyo, New York, San Francisco: Kodansha International, pp. 50-53, 1986.

[57] C. Crasemann Collins, "Le Corbusier's Maison Errazuris: A conflict of Fictive

Cultures", *The Harvard Architecture Review*, Vol. 6, pp.42-46, 1990.

[58] Since the posts were made from tree trunks and left in their natural shape, the size of posts on the drawings is given approximately.

[59] T. Itoh, *ibid*., p.84. Measurements given in 'inch' in this book have been converted to centimetres: 4.8 inch = 12.192cm (12.2cm).

[60] J. Murata, K. Suzuki, S. Okamoto (photo.), *Katsura Rikyū* (村田治郎, 鈴木嘉吉, 岡本茂男写真: 桂離宮, 毎日新聞社, pp.321, 323, 327, 329, 1982).

[61] 3.9 inch = 9.906cm (10 cm).

[62] Le Corbusier and P. Jeanneret, *Œuvres Complètes 1929-1934*, Les Editions d'Architecture, pp. 48, 49, 51, 1964.

[63] A., *ibid*., Raymond, p. 134, 1973. Japanese: *ibid*., p. 119, 1970.

[64] A. Raymond, *ibid*., p.13, 1940. Japanese: *ibid*., p. 89, 1967.

[65] C. Kawashima, *ibid*., pp. 13, 14.

[66] C. Kawashima, *ibid*., p. 17.

[67] A. Raymond, *ibid*., p.130, 1973. Japanese : *ibid*., p. 117, 1970.

[68] C. Kawashima, *ibid*., p. 17.

[69] K. Ichiura, *ibid*., 1933.

[70] As Professor Mizawa pointed out, Raymond's project was not mainly intended for advertising purposes, as has sometimes been suggested. See Mizawa H., *Antonin Reemondo jūtaku monogatari* (三沢浩: アントニン・レーモンド住宅物語, 東京: 建築思潮研究所編集, 建築資料研究社, p. 137, 1999).

[71] A. Raymond, *ibid*., p. 13, 1940. Japanese: *ibid*., p. 89, 1967.

[72] A. Raymond, *ibid*., p. 134, 1973. Japanese: *ibid*., p. 119, 1970.

[73] A. Raymond, *ibid*., p. 5, 1953. Japanese: *ibid*., p. 171, 1967.

[74] A. Raymond, *ibid*., p. 2, 1953*. Japanese: *ibid*., p. 181, 1967.

[75] A. Raymond, *ibid*., p.13, 1940. Japanese: *ibid*., p. 89, 1967.

[76] A. Perret, *Contribution to a Theory of Architecture*, unpaged, 1952.

[77] As K. G. F. Helfrich points out in his PhD dissertation: *Building the Contemporary House: modernity, regionalism and the ideal of Japan in Antonin Raymond's residential designs, 1921-1952*, PhD thesis, University of Virginia, pp. 152-153, 1997.

[78] Le Corbusier and P. Jeanneret, *ibid*., pp. 49, 51. See also a description of the windows in the letter sent by le Corbusier to his client Mr. Errazuris with the plans of the house (April 4, 1930) kept at Le Corbusier Foundation, Paris.

[79] Le Corbusier, *Towards a New Architecture*, New York, Washington: Praeger, p. 8, 1974 (7th ed.).

[80] Le Corbusier and P. Jeanneret, *ibid*., p.45, 1964 (translated by the author).

CHAPTER 5
A STUDY OF THE RELATIONSHIP BETWEEN ANTONIN RAYMOND'S WAY OF THINKING AND WAY OF DESIGN

Introduction

The purpose of this final chapter is to explore the nature of the relationship between Antonin Raymond's way of thinking and way of design. This will be the final step taken towards the definition of Raymond's "architectural identity" in the context of this dissertation. Exploring the relationship between Raymond's way of thinking and way of design will enable us to highlight through which characteristic process Raymond translated his way of thinking into architectural design and consequently, and how they reflect each other. On a theoretical level, this means exploring the level of "coherence" between Raymond's way of thinking and way of design. To understand the necessity to establish such coherence, we may consider the field of cognitive sciences and particularly linguistics, in which coherence between ideas and their expression is a condition for meaning.

The architectural analysis of Karuizawa house carried out in the fourth chapter showed how components of the Japanese *minka* 民家 and of the *sukiya* 数奇屋 residence were combined with forms borrowed to prototypes of Western modern architecture.[1] By showing how Raymond made use of the *tatami* based proportion system, the natural treatment of materials available locally, and the Japanese tradition for carpentry in order to integrate all the elements of the building, the chapter placed an emphasis on the architect's "way of design". This "way of design" stood out as a complex process through which elements taken from different cultures and architectural archetypes were blended into one unified ensemble. At this stage, we are therefore able to state that Raymond's way of design is embodied in the process of "synthesis", which involves "complexity".

In Hegel's dialectic, the phenomenon of "synthesis" is designated as follows: "synthesis is the final stage of a triadic progression in which an idea is proposed, then negated, and finally transcended by a new idea that resolves the conflict

between the first and its negation."[2] This system is commonly referred to as "thesis, antithesis and synthesis". However, in the context of the architectural analysis carried out on Karuizawa house, this definition of "synthesis" must be treated with caution, if we consider the existence of common points between traditional Japanese architecture and modes of expression used by the western modern architectural movement, an idea partly defended by Antonin Raymond.[3] In other words, this means that in the case of Karuizawa house, it is not possible to assume that traditional Japanese building techniques and architectural elements, and their western counterparts are strictly antithetical. It is therefore not possible to simply divide the elements that came into the composition of Karuizawa house into two strictly antithetical categories that would fit into Hegel's triadic system. For this reason, in the context of this study, the term "synthesis" is used in its wider and general use, where it is considered as the gathering, or assembling of "parts or elements so as to make a "complex" whole."[4]

In order to explore the level of coherence between Raymond's way of thinking and way of design, we will now re-examine Raymond's way of thinking and way of design with the aim to determine which concepts embody those two components of Raymond's architectural identity. This study is based on the same lectures and articles as the one used for the study of Raymond's definition of the "Architect" carried out in the first chapter, and on the study of Karuizawa house carried out in the fourth chapter.

1 Principles in writing

1.1 A survey of Raymond's writings

As we saw in the third chapter of this thesis, the architect's writings[5] provide material for the study of his way of thinking, by giving access to a set of principles which represent the theory of the architect. Raymond's writings provide the information we need in order to determine which principle is at the core of his way of thinking and design on two levels, one is explicit and the other is implicit. We obtain the information on an explicit level when the architect consciously and actively articulates the principles which are at the core of his way of thinking and design. We obtain information on an implicit level by surveying the architect's

writings and pointing out concepts that appear repetitively and represent these principles. Based on these two levels of observation, the survey of Raymond's writings shows that the principles that stand out in his architectural discourse are: "simplicity", "directness", "economy", "naturalness", "honesty" and "functionality". This set of principles being established, the next step consists in determining whether there exists a hierarchy in the use of these principles that can reveal whether some of them or one of them is predominant, and to discuss the definition of these principles in Raymond's way of thinking. This method is both based on quantitative and qualitative study of the principles within the architect's writings. The quantitative approach, that is, the physical survey if the architect's writings provide an immediate and effective result because of it is based on a physical observation of the writings. In the case of Antonin Raymond, this approach shows that it is the principle of "simplicity" that appears the most. This testifies for the fact that "simplicity" is at the centre of Raymond's way of thinking on an explicit and on an implicit level.

1.2 "Simplicity" in the text

After pointing out that simplicity is the most present principle in Raymond's writings and therefore way of thinking, we know need to articulate the definition of "Simplicity" in Raymond's way of thinking. Yet, as I pointed out in the third chapter, Raymond's discourse is of a doctrinal nature.[6] This statement was based on the results of research carried out on the discourse of architects in the field of Architecturology. Architecturology has shown that the main goal of a doctrinal type of architectural discourse is not to provide a clear and articulate definition of the concepts it uses, but rather, to serve the architect's own ideas and to convince individuals and society of the value and validity of these ideas.[7] Nevertheless, while the architect himself may not articulate the definition of each concept he uses, his writings usually provide the information that will enable us to grasp the meaning of these concepts in his own point of view.

One way to approach the definition of a concept is to look at how the word which represents this concept is used in the architect's writings. The following are select examples of the way Antonin Raymond uses the word "simplicity" (or "simple") in his essays:

> "*freshness and simplicity*"[8], "*simplicity and elimination*"[9], "*clarity and simplicity*"[10], "*simplicity and frankness*"[11], "*simplicity […] should be […] a natural solution*"[12], "*The simplest, the most direct and most economical solution of the problem*"[13], "*Purity means simplicity, getting to the core of things, the elimination of everything that is in the way of powerful expression*"[14]. (A. R. LAARK, 1967)

The striking point in this selection, and it is also the case throughout the corpus of essays used for this study, is that "simplicity" is always followed or preceded by one or several other concepts. In the context of the present study, I call them "peer concepts". For example, the last sentence associates the definition of "simplicity" with that of "purity", and "elimination" but does not give a direct definition of "simplicity". For the time being, it is worth mentioning that in terms of frequency, the concept to which "simplicity" is most often joined is "directness" (or "direct").

Another characteristic is that when one or several concepts are mentioned, "simplicity" is always one of these concepts. In other words, while "peer concepts" are not used repeatedly, "simplicity" stands out as a constant in Raymond's choice of principles.

This leads to four potential interpretations:

1- The constant presence of "simplicity" throughout the text means that it should be considered as the most important of architectural concepts in the point of view of Antonin Raymond.

2- The repetition of the word "simplicity", added to the fact that it is always mentioned alongside other concepts, means that Raymond was not able or chose not to provide a definition of the concept itself.

3- The constant presence of at least one "peer concept" next to "simplicity" means that each of these "peer concepts" can be considered to be one component of the definition of "simplicity".

4- Consequently, we could say that since "simplicity" is sometimes used on its own but other concepts are not used without "simplicity", the principle of "simplicity" encompasses all other concepts.

In regards to "simplicity" in the work of Antonin Raymond, a valuable contribution has been made by Prof. D. Leatherbarrow of Pennsylvania University.[15] While providing an outlook on the status of "simplicity" among the architectural community of the 1920s and 1930s, including Frank Lloyd Wright, who was

Raymond's master, Prof. Leatherbarrow stresses the influence of Japan on Raymond and its consequent association with "elimination" and "economy". He also remarks that in the case of Raymond, "simplicity" as a principle should not be understood as a "recommendation about an aesthetic quality"[16], but rather considered for its "ethical meaning"[17]. In regards to the present study, the importance of this contribution is therefore that it also places the emphasis on the architect's "way of design" rather that on the architectural object as a "form".

1.3 "Mother" and "peer" concepts

If we consider the four possible interpretations listed above, "simplicity" therefore stands out as a concept that can only be defined through the use of "peer concepts". In this chapter, I therefore refer to "simplicity" as a "mother concept". This means that in order to understand the definition of "simplicity" in Raymond's way of thinking, it is necessary to study the definition of its "peer concepts".

For the purpose of defining "simplicity", it is necessary to select a limited amount of peer concepts which will be defined in detailed. In some of his essays Raymond clearly articulates a list of five principles he considers to be at the base of modern architecture, including "simplicity":

> "*Simplicity, directness, naturalness, economy of means, perfect material and spiritual function in the creation as a whole and in all its details are the aim*."[18] (A. R. 1953)

According to this extract, we can say that Raymond's theory of architecture is based on five principles. However, the survey of the corpus of essays used for this study shows that Raymond also gave considerable attention to the principle of "honesty" in his way of thinking and design. In the context of the present study I therefore consider the following as the six principles at the base of architecture in Raymond's way of thinking: "simplicity", "directness", "naturalness", "economy", functionality" and "honesty". It is now possible to examine the peer concepts from which we will be able to grasp the definition of "simplicity" in Raymond's way of thinking.

2 Elements of a definition of "simplicity"

2.1 Directness":

In Raymond's essays, "directness" is associated to two main ideas: the first is that "directness" must be expressed both in the use of the building and in its construction:

> "*directness is to organize spaces strictly so that their functions are at their best, their interrelation and their orientation unimpaired*."[19] (A. R. 1949).

> "[…] *a column is a column, a beam is a beam, undisguised and unornamented, but doing its work perfectly.*"[20] (A. R. 1938).
> "*We* (the architects) *should base our designs directly on the needs and requirements of the client and deal directly with the conditions growing out of the location and the work itself*."[21] (A. R. 1938)

One of the purposes of "directness" therefore emerges as being to serve "functionality" of space and construction. This is also the case in Raymond's comment about Karuizawa house:

> "*Everything was eliminated that did not have a practical purpose*"[22] (A. R. 1940)

The second important idea regarding the principle of "directness" is particular to the context of Japan. From his study and observation of Japanese traditional architecture, Raymond felt that "directness" was the main characteristic of the relationship between man and nature, and therefore between building and nature. For Raymond, it is the character of the relationship between man and Nature that determines the quality of human life. Nature is considered as a link between man and the greater Universe, therefore introducing a spiritual dimension in his way of thinking:

> "*The man is happy when he is in contact with the Universe, God and nature that surround him and feels them close to himself. An architect is an artist who builds a structure which gives men such happiness when they are in it*."[23] (A. R. 1953)

In the context of Japan, he felt that this relationship was the most "direct" and should remain so in modern architecture. Raymond writes about the quality of Japanese residential architecture in the following terms:

> "*The solution was clear […] because they* (the client and the carpenter) *dealt directly with life*"[24] (A. R. 1938)
> "*Limitation of any kind and sentimentality are avoided because it is Nature herself that is the teacher of the client and the trades. The plan expresses it by creating a direct contact with nature through large openings or even letting the garden enter into the house*."[25] (A. R. 1938)

In fact, for Raymond, "directness" is a principle that should rule ones attitude in life as a whole: "*Knowledge is obtained from direct experience*."[26] (A. R. 1940)

Based on these observations, we can say that the principle of "directness" is relevant in regards to two aspects of Raymond's way of thinking. First, because it places an emphasis on the search for functionality of space and construction, therefore Raymond establishing his affiliation to the *Functionalist* branch of the modern movement in Europe. Secondly, because it shows Raymond's allegiance to a Japanese conception of space and construction, by stressing the fact that he is deeply conscious of the importance of a "direct" relationship between man and Nature and the necessity to express this relationship in architecture.

Raymond acknowledged the existence of common points between Western modern architecture and Japanese traditional architecture. But on the other hand, by stressing the importance of Nature as a spiritual dimension characteristic of Japanese conception of space and construction, he acknowledged that these common points were rooted in two different cultural backgrounds. Two ideas reunited in the following words:

"*All is the direct result of a necessity, be it material or spiritual*"[27] (A. R. 1938)

2.2 "Honesty":

In Raymond's essays, the principle of "honesty" applies to the issues of structure and materials. The following excerpt is taken from one of Raymond's most important essays. It gives the detailed explanation of what honesty is and the purpose it must serve in his point of view:

"[…] *the steel structure, whose steel is hidden by masonry simulating forms that are those of a masonry structure, is evidently dishonest and fundamentally wrong and repulsive, no matter how pleasing to the misinformed eye. It is uncreative, as exterior forms must be an honest expression of the interior structure.*" *Just look at your hand, how clearly and honestly the bones and muscles are felt through the skin, how clearly every physical function of the different components are manifested even to the pores, the hair, the nail, each honestly performing a definite job and the clearer those functions are expressed, the more beautiful the hand, The design of all objects and creatures in Nature will, if profoundly studied, clearly reveal that Universal Law to everybody who is seeking it. In a beautiful design all members and all static and dynamic functions are clearly and definitely expressed, all attributes of the structural materials are given full play, all nonfunctional elements are totally eliminated and nothing is suffered to exist, that*

would mar or confuse such sheer honesty."[28] (A. R. 1949).

Here Raymond's begins by stating what is "dishonest" rather than giving a definition of "honesty". In any case we understand from the first lines that an honest design should not conceal its structure behind ornaments. Furthermore, structural clarity should not be made subordinate to esthetic consideration, but rather, used as a tool to express beauty.

This concern for "honesty" and the means by which it should be achieved echoes very clearly the way of thinking of two major figures of early modern architecture: the French engineer and architect Auguste Perret, and Raymond's master Frank Lloyd Wright. We know that Raymond received the influence of Perret[29] especially through his collaboration with Bedřich Feurstein, a Czech architect who worked in Perret's office before joining Raymond from 1926 to 1928. In a previous chapter, I also pointed his influence on Raymond in regards to the definition of the "Architect" as an "engineer." The following words by Perret reflect the principle of "honesty" as defined by Raymond:

"*He who conceals any part of the truss deprives himself of the only legitimate and most beautiful ornament of architecture. He who conceals a pillar makes a mistake. He who designs or builds a fake pillar commits a crime*"[30] (A. P. undated)

In his definition of "honesty", Raymond also states the necessity of considering Nature as the essential guide to true and beautiful architecture. Raymond was most certainly inspired by his master in choice of the human hand to support his statement of a necessary unity between structure and form. The example of the human hand was used by Frank Lloyd Wright to illustrate the concept of "Plasticity" as the unity between structure and form in organic architecture:

"*Architecture is now integral architecture only when plasticity is a genuine expression of actual construction just as the articulate line and surface of the hand are articulate of the structure of the hand.*"[31] (F. L. W. published 1954)

Perret also borrowed images from nature to support his theory of structure and construction, giving his theory an organic quality that is not found in another influential architect of the time, Le Corbusier:

"*The ossature is to the building what the skeleton is to the animal. Just as the animal's skeleton […] contains and supports a diversity of organs […] the truss of the building […] should be able to contain the variety of organs and organisms*

[…] demanded by function and destination."[32] (A. P. undated).

In the context of Japan, Raymond had no trouble in recognising the validity of "honesty" that is to say, clarity of structure and unity between unity and form. He made the following comment about the traditional farm house, which was one of his main inspirations for the design of Karuizawa house:

> "*[…] it* (the farm house) *developed from the inside function absolutely honestly, all structural members were expressed positively on the outside, the structure itself was the finish and the only ornament […]*."[33] (A. R. 1960)

From the above observations we can for the meantime say that the principle of "honesty" finds its main justification in an organic approach of architecture. In terms of theory, this principle was rooted in the ideas developed by two major architects of the western modern movement who played an important part in the formation and articulation of Raymond's way of thinking. We know that Frank Lloyd Wright received a strong influence from Japanese architecture and Raymond had somehow been intellectually prepared to understand Japanese architecture and recognise its qualities that were with no doubt discussed during his apprenticeship at Taliesin and later in Japan.

2.3 "Naturalness":

As we have seen from the study of "directness" and "honesty", the relationship between man and Nature is at the centre of Raymond's way of thinking. In terms of design, this principle finds its most tangible application in the use of locally natural materials, and in their treatment. The architect should endeavour to preserve the material's original quality and apply the minimum treatment to it.

In this point of view he was directly influenced by traditional Japanese architecture, and more particularly Japanese residential architecture, which "*resembles the evolution of a natural form. […] wood in its natural state, straw under foot, and sand on the walls*".[34] (A. R. 1935). But once again we can say that his period of apprenticeship with Frank Lloyd Wright prepared Raymond for the development of this way of thinking since Wright was himself inspired by the approach to the questions of materials in Japanese architecture from the early stages of the development of the prairie houses. It was mainly through the Japanese

woodblock prints that Wright received this influence:

> "*They were a lesson in elimination of the insignificant and in the beauty of the natural use of materials*."[35] (F. L. W. 1954)

The prints were also an inspiration in terms of the philosophy behind the use of materials, that is to say, to use locally available materials and to use them for their intrinsic qualities:

> "*He (the architect) must sensibly go through with whatever material may be in hand for his purpose according to the methods and sensibilities of a man in this age. […] All materials have their own inherent style. They may be beautiful depending on how they are used by the architect*."[36]

Raymond found witnessed these qualities, especially in the farm house where materials were always found locally and "*fit for their purpose*".

The "principle of naturalness" was also directly connected to that of "economy", since the use of locally available material and their minimum treatment implied the "*economy of means*", another principle pursued by Raymond. In any case Raymond found the justification for designing naturally in the functional and economical argument:

> "*[…] we should design with the aim to do things naturally, fit for their purpose and economically*."[37]

Japan was also a means The reason why for Raymond, Japan provided the best environment to achieve such a goal, was to be found in the fact that:

> "*Nature has instilled into the Japanese a deep comprehension of what can be called absolute values, timeless, unchangeable, in terms of principles and natural laws, and they have made these an integral part of themselves, so much so that they themselves do not know it.*"[38] (A. R. 1953)

Naturalness was also a key to "beauty", a quality especially appreciated by Raymond in the use of wood. Raymond talks of the "pristine beauty" of natural materials, especially in wood. However, his idea of the beauty found in naturally treated materials was not limited to "natural" materials, such as those used for the construction of the Japanese house. Raymond also believed that such quality could be found in man made materials such as concrete and metal:

> "*We see beauty in natural wood, in well worked metals, we again feel their quality, their meaning in the universe*".[39] (A. R. 1940)

Here we can witness once again the spiritual outlook that Raymond has on life and architecture in which Nature plays becomes the medium between man and the Universe.

2.4 "Economy":

As we have seen, the principle of "naturalness" allows the architect to achieve "economy", because of the limited action it involves in terms of transportation, handling and treatment of materials. In the context of Japan, following the principle of "economy" as a result of an ethical choice would also lead to the achievement of "naturalness".

But Raymond was careful to stress the distinction between "economical" and "cheap", hereby testifying for the respect with which materials, and especially natural materials, should be treated. This he had learned form the observation of Japanese architecture and particularly in *minka* architecture:

"*Economy* […] *does not mean cheapness. It means that nothing is wasted*."[40]

The principle of "economy", applied as the result of a way of thinking, of a philosophy of design was one of the necessary routes to the achievement of "beauty" as Raymond explained:

"*In fact, it is often just because of the economy of means required to achieve an end, that a building has attained a memorable quality. Thus, I have often found greater beauty in the simple marginal house, whether it be in the Pennsylvania country-side or in far-off Japan….*"[41]

Beyond a deliberate choice on behalf of the architect, designing "economically" was in any case a prerequisite to any architectural practice in prewar Japan, particularly in the 1920s and 1930s, during the first years of Raymond's practice. While in the West, man was struggling with questions such as abstraction of form, mass production, and how to include in his daily life the amazing power of a machine he had himself created, Japan nurtured a culture of craftsmanship, which implied building everything by hand.

Raymond found himself in a position where he aspired to both tendencies of this architectural context. It is in this need to reconcile both sides that Raymond's way of design and thinking is rooted.

The principle of economy was also linked to that of sense of necessity for "elimination". An elimination of ornament, an elimination of the unnecessary that was implied in terms of construction and space, but as professor Leatherbarrow points out, as the result of the elimination of the unnecessary in terms of practice, of way of living which would be a natural outcome of an architecture built according to the principle of "economy".[42]

2.5 "Functionality":

Because of the important status of the principle of "functionality" within the set of ideas defended by the pioneers of the modern movement in Europe, understanding Raymond's definition of functionality and his view on the way it should be achieved creates the opportunity to grasp one aspect of his relationship with the modern movement. The analysis of Karuizawa house showed that Raymond was both eager to emphasise his allegiance to the principles of Japanese traditional architecture and to take part in the debate on modern architecture as to its universal dimension. Raymond's writings in fact often mirror the internal conflict that sometimes took place in Raymond's way of thinking, and the distance that he wished to establish between the radical and rational thought of the West.

One of the main phrase illustrating this idea in Raymond's essays is the following: "*mere functionalism is not sufficient to create a great architecture*."[43] (A. R., 1940).

With these words, Raymond was expressing open criticism towards the predominant branch of the modern movement which was promoting what is commonly designated under the term "International Style". This architecture was embodied in the "white cube". Considering the fact that Karuizawa house was inspired by Le Corbusier, probably the most representative figure of this branch of the modern movement, a conflict appears in Raymond's way of thinking. This conflict is embodied in the fact that although Raymond defended some principles in common with the modern movement, his conception, his interpretation of these principles was different. In the same paragraph as the above mentioned quote, we can read the following words:

> "*the architect still has the larger part of his work before him in converting sensible architecture into beautiful architecture*." (A. R., 1940)

These words reveal the nature of the conflict in Raymond's way of thinking with the conception of the principle of "functionality" as expressed in the west, were functionality stemmed, in his eyes, from an excess of rationalism and materialism. This excess resulted in what Raymond refers to as "cold", "senseless" and "strict" architecture.

> "*The problem of Function, Form and Matter with which we struggle ponderously is solved with incomparable ease for it is seen in its right perspective, the exteriorization of an idea.*"[44] (A. R. 1935)
> *"We talk too much and lay too much emphasis on Technology and techniques and functions, and too little on the beauty creating ideas behind the design."*[45](A. R., 1949)

Through his experience in Japan, Raymond had become aware and understood of the necessity for any design to be based on an idea, something that he stated in his first writings. It was this "spiritual" idea on which the architect should focus. In Raymond's architecture this idea was embodied in the expression of the relationship between man and Nature and the creation of beauty.

"Functionality" was nevertheless defended by Raymond. But rather than considering the principle of "functionality" as the purpose behind a design, Raymond considered functionality as a medium for the expression of the spiritual idea behind the design and for the expression of beauty, just as he did for the other principles he defended as those at the root of a good design. Raymond's writings testify for his attempt to solve the conflict between a rational and spiritual approach of modern architecture in his use of terms such as "*spiritual function*"[46] and "*inner function*"[47]. He also designated two kinds of "functions", those "*practical*" and those "*aesthetical*".

In Raymond's way of thinking, the principle of "functionality" therefore holds the double position of connector with the ideas of the European modern movement and indicator of the conflict between Raymond and the rationalist trait of this same modern movement. Japanese traditional architecture provided him with the necessary means to resolve this conflict through what Raymond called its "wonderful tradition of functionalism", where a certain rationality which might be better designated as "pragmatism", and spirituality were united in the expression of certain aesthetic values.

3 "Simplicity" as a tool

3.1 "Simplicity" in the context of modern architecture

The first part of this chapter has pointed "Simplicity" as the main principle in Raymond's architectural discourse. The definition of the peer concepts that define "simplicity" in Raymond's discourse emphasised the role of the principles at the base of Japanese traditional architecture in Raymond's choice of "simplicity" and definition. It has also pointed out that Raymond's defence of "simplicity", through functionalism for example, affiliates to a certain level his way of thinking to that of the modern movement and the ideas it was promoting in the 1920s and 1930s. If we consider Raymond's architectural discourse is embodied in the principle of "simplicity" and its affiliation with the European modern movement, we should say a few words about the reasons for such unanimity towards this principle. As Raymond states himself at the beginning of his writings:

> "*In the Western countries at the beginning of the 19th century, the imitation of classic European styles was predominantly in vogue. During the latter half of the 19th century the appearance of modern technology in architecture resulted in the confusion and ugliness of the so-called Victorian period which dominated the human environment almost entirely until the 2nd World War.*"[48]

These words remind us that ideas and movements that promote them are usually born in reaction to existing ideas when these ideas no longer fulfil there task and reflect their time. This was therefore the case in the birth of the modern movement in architecture, which originated in the field of the arts, particularly in cubist painting and its further purist development. As Raymond's states in this, the first half of the twentieth century was dominated by an establishment that promoted historical styles in all creative fields and especially in architecture. This trend was based on a decorative approach of architecture, expressed in the over abundant use of ornamentation. Consequently, the concepts embodied in the words "decorative" and "ornamentation" came to represent the promotion of historical styles in architecture that was prevalent at the time.

From this point view, it is easy to understand how the principle of "simplicity" came to embody the ideas promoted by the modern movement. One of the first materialisation of this principle in architecture was the elimination of all decorative

elements and opening of the plan. It is in this first stage of the modern movement life that most characteristics can be found in common with Japanese traditional architecture, and this period corresponds with Raymond's beginnings as an architect. In the light of this historical context, we can say that Raymond's architectural discourse, the promotion of "simplicity" is rooted both in the principles of Japanese traditional architecture and in the theory promoted by the European movement from 1910 and its particular development in architecture towards the 1920s.

3.2 "Simplicity" in theoretical justification

Let us now once again consider Raymond's writings in regards to what they reveal as to the purpose of the architect. Until now, the study of Raymond's writings has shown that the doctrinal nature of his architectural discourse testifies for his need to articulate and promote his own theory. This is achieved through the use of a certain number of key concepts that have been discussed at the beginning of this chapter, and particular in the concept of "simplicity" which is considered in this thesis as the core principle in Raymond's architectural discourse.

We have seen in the previous paragraph that the concept of "simplicity", through the peer concept that define it, embodies aesthetic and spiritual or philosophical values inspired by traditional Japanese architecture, that Raymond wished to promote as a solution for modern architecture. We have also seen how the principle of "simplicity" affiliated his way of thinking with the endeavour for simplicity through elimination of decoration and ornamentation that characterised the first stage in the development of the European modern movement. Consequently, beyond the values that it promotes, should also be considered at a means to defend the common grounds of traditional Japanese architecture and modern architecture in Raymond's way of thinking. Raymond actually states in one of his first essays that the purpose of modern architecture is the rediscovery of Japanese principles of architecture.[49]

Finally, we may ask the question as to what are the implications of articulating a theory on the principle of "simplicity", in the perspective of promoting ones ideas. Philosophy of science may provide elements of an answer to this question. In terms of linguistic definition, "simplicity" designates the property of something that is not un-combined and it is consequently associated with purity, clarity and beauty. In

philosophy, simplicity is also associated with "truth", but this is a wide question that would have to be dealt with in a further development of this research. For the time being, we will only point out that the quest for beauty, as we have seen in the third chapter of this thesis, is particularly present in Raymond's way of thinking. Furthermore, simplicity is synonymous with "freedom", because of the reduced number of components that it implements in its application. The quest for simplicity as a reaction against the historical styles in architecture is a direct illustration of this idea. In this case, simplicity meant freedom from the rigid codes and rules of design that served the purpose of reproducing forms that denied the individual's freedom of thought and expression.

Lastly, in philosophy of science, "simplicity" is a determinant criterion in the theory competition. This idea is embodied in the idea derived from Occam's razor, according to which when theories are equal in other areas, the theory which is built on fewer assumptions should be privileged over a theory based on a greater number or on more complex assumptions. Simplicity is therefore also synonymous with "unity". This outlook on the principle of "simplicity" cannot be applied directly to Raymond's theory, but we can see that the implications of "simplicity" in various field tend towards the same idea that "simple" is synonymous with "truth", "beauty" and "universal truth", three values that Raymond was eager to defend and express in his way of thinking and way of design. In fact, Raymond associated the necessity of achieving "simplicity" to the idea of "*seeking the essence in things*"[50], or "*getting to the core of things*"[51], something that he had felt to be at the heart of Japan's philosophy in the field of the arts: "*A typical aspect of Japanese arts in general is the desire to arrive at the very essence of the subject by almost endless simplification and elimination, as is clearly demonstrated in painting and in poetry.*"[52]

3.3 "Simplicity" in Karuizawa house

In this third and last part of the chapter, we will point out the means through which Raymond achieved an image of simplicity in his design for Karuizawa house. This is particularly important if we consider the fact that Raymond's way of design is embodied in the process of synthesis which is a complex process. We are then

confronted with an apparent contradiction or paradox in which a design conveying an image of simplicity is the result of a complex process. Raymond himself described Karuizawa house in the following terms: "*The building was direct, simple in its solution.*"[53] (A.R. 1940). This phrase reminds us of the fact that in Raymond's theory, "simplicity" can be achieved through the application of the peer principles that we have examined at the beginning of this chapter. These principles are: "directness", "honesty", "naturalness", "economy" and "functionality". Raymond endeavoured to apply these principles both in space organisation and construction. In the case of Karuizawa house, Raymond's allies were the Japanese carpenters, who *"understood so fully the intention for complete naturalness in carrying out the structure*."[54] (A. R. 1970).

In concrete terms, Karuizawa house illustrates the principle of "simplicity" as the core of Antonin Raymond's discourse in the following way: through the clear expression of the spiritual idea, or the purpose behind its architect's design, that is, the expression of the relationship between man. The nature of this relationship, which is one of harmony and unity, is expressed in the use of natural materials in construction, furniture and details. Simplicity is also expressed through clarity and functionality of the plan that was based on the combination of two prototype plans respectively conceived by Le Corbusier and Frank Lloyd Wright. Unity was given to the plan through the use of the tatami as proportion module. The step effect inspired form Katsura Imperial Villa served both the spiritual idea behind the design in creating a multitude of possible views towards the landscape and a functional purpose by increasing effective natural ventilation in this particularly humid area. Simplicity was also achieved through economy of means, this economy of means being itself achieved through the use of locally available material and by applying a reduced treatment to these material. This economical purpose in return served the principle of "naturalness", "directness" and "honesty", which are also inherent to simplicity in Raymond's way of thinking. Finally, simplicity was expressed in the construction of the house by limiting the number and size of structural members to the minimum possible size and by assembling them in the most direct and economical way.

Conclusion

This chapter presented a study of the relationship between Antonin Raymond's way of thinking and way of design. The medium for this study was the principle of "simplicity" which is at the core of Raymond's architectural discourse, as demonstrated in the first part of the chapter. The approach chosen for the definition of the principle of simplicity in Raymond's way of thinking has led to the conclusion that "simplicity" should be considered as a "mother concept" which embodies five principles on which architectural discourse and way of design is base. These principles are explicitly listed by Raymond as "directness", "honesty", "naturalness", "economy" and "functionality". With the definition of Raymond's core principle, we have witnessed that "simplicity" is the fruit of a somewhat complex combination of various concepts, therefore echoing the synthesis process at the base of his way of design.

In Raymond's point of view the principle of "simplicity" and its peer principles are most faithfully expressed in Japanese architecture. Through the promotion of "simplicity" as main concept, Raymond promoted the common grounds of Japanese traditional and European architecture, but he also pointed out the fundamental difference in which Japanese expression of "simplicity" stemmed from a spiritual approach to architecture mainly expressed in the relationship between man and nature, and the rational approach of the west where emphasis was placed on the quest for form. Beyond affirming both the common grounds and contradictions in the relationship between Japanese architecture and European modern architecture, the promotion of simplicity also testifies for Raymond desire to achieve a universal dimension in his theory and therefore in his architecture.

In the last part of the chapter we have re-examined Karuizawa house, in regards to the five principles promoted by Antonin Raymond." These principles found illustration in Karuizawa house through his collaboration with Japanese collaborators and carpenters, who through their mastering of traditional techniques were most able to translate Raymond's intentions into a tangible work of architecture.

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CONCLUSION
ELEMENTS OF A DEFINITION OF ANTONIN RAYMOND'S "ARCHITECTURAL IDENTITY"

1. Reminder of the topic

This thesis presents a study of Antonin Raymond's "architectural identity". Rather than the word "Style", which is commonly used to describe the qualities that identify a particular architect or artist, the expression "architectural identity" has been chosen. because it includes not only the qualities of the final work as a built object and is not limited to formal consideration. The expression "architectural identity" also encompasses the creative process through which the architect gives birth to buildings at a given time, and in a given context. In the context of this study, the architect's "architectural identity" is considered as the result of the combination between the architect's way of thinking, way of design and the relationship between the two.

The material chosen for the purpose of the definition of Antonin Raymond's "architectural identity" belongs to the category of residential architecture, in the form of houses designed by Raymond in Japan between 1921 and 1938. The individual house was chosen as a topic because as a type it has played a particularly important part in the development of modern architecture. The small scale of the private house and the level of intimacy it involves between the architect and the built object make it the ideal material for the study of Raymond's way of design and consequently for the definition of his architectural identity.

2. Findings

2.1 Regarding Antonin Raymond's background

Antonin Raymond's background was examined through a group of four topics. The first topic was the initial shell, which refers to the architect's first experience of architecture in the context of two homes that marked his childhood. The second topic was the presence of Nature in everyday life. The third topic was the place of Art in Raymond's education and finally, the fourth topic was the context in which he was first introduced to the pioneers of the modern movement.

The purpose of this approach of Raymond's intellectual and cultural background was, on a first level, to explore the roots of Raymond's future way of thinking, which is one of the components of the architect's architectural identity. On a second level, the selection of four topics was intended to place emphasis on elements of Raymond's

culture that played a relevant role in his close relationship with Japan on a philosophical and cultural level. By making light on the roots of Raymond's way of thinking and outlook on life, it is possible to explain, why Antonin Raymond connected in such a strong way with Japan and how he was able to practice architecture in the country and play an active role on the Japanese architectural scene, while other foreign architect's part was often limited to that of a "representative" of western architecture in Japan. If we consider another western architect who is the only other architect who spent a long period of life time in Japan, in a similar way to Raymond, the difference is quite striking.

From the point of view of phenomenology, the study of Raymond's background showed that Raymond's first experience of the built environment and the house resulted in a mild conflict between town and countryside. On one hand, the town home awakened his conscience of the need for the casting of the old styles and the need for an architecture which reflects and fits the life of its contemporary society. However, the same town also provided a sense of the value of tradition, embodied in the authentic architectural heritage of Kladno but most importantly Prague.

The countryside, on the other hand, as the place of connection with Nature, was where Raymond learned to appreciate earthen things, and developed an ideal for agrarian way of life at the farm of his grandparents. It is in my opinion the conscious of Nature, embodied in an ideal of the country side and the farm that first determined the strength of Antonin Raymond's connection with Japan. This connection may never have taken the form of a 40 years long exile without the presence of Frank Lloyd Wright, who was the linking agent between Raymond and Japan. Wright was a linking agent between Raymond and Japan not only because he physically introduced Raymond to Japan, but more importantly because of his interest in Japanese things, particularly art, which played an important part in Wright's work. At first Raymond was enchanted by Wright, but as Wright's style evolved, Raymond became aware of a gap between him and his master. Raymond was already in Japan when he became tired of what he called "Wright's mannerism", and Japanese architecture naturally presented itself as a remedy for Raymond. It presented itself as the essence of What Wright had taught to Raymond about the status of Nature in philosophy of design, without the mannerism that Raymond needed to distance himself from.

2.2 Regarding Antonin Raymond's way of thinking

The third chapter focused on the nature of Antonin Raymond's architectural discourse, and his definition of the "Architect". The architect's way of thinking is

directly connected to the architect's architectural discourse, which is revealed in the architect's writings. The study of Raymond's architectural discourse was carried out using the point of view of Architecturology, a field which studies the process of creation in architecture. According to the analysis of Raymond's writings, the nature of his discourse emerged as a "doctrinal". The characteristic of a doctrinal discourse is that is does not aim to demonstrate or explain the concepts on which it is based, but rather, to serve the architect's desire to convince others of the validity of his ideas.

Raymond's writings testify for his need to provide theoretical background to his way of design, although his discourse is not theoretical. In this manner, he is close to other architects of his time, Le Corbusier, Auguste Perret, Frank Lloyd Wright. Considering the role played by Wright in Antonin Raymond's architectural development it is possible to observe many similarities between their respective writings. On several occasions Raymond's uses the same expressions or examples as Wright to support his discourse, and the presence of philosophy which places Nature at its center can be found throughout his essays. From the study of Raymond's writings, we can also conclude that Wright was the most influential factor in Raymond's definition of the "Architect". The artist, the poet, the engineer, the guide are all figures that inhabit Wright's ideal of the Architect.

If we compare Wright and Raymond's way of thinking, it is also important to note that Wright's had an education where religion based on protestant values fundamental had an important role. Raymond on the other hand was officially of Jewish religion but was brought up in a non practicing family. However, his love of Nature provide him with a spiritual outlook on life which was further enhanced by his encounter with Wright and then with Japan. Therefore although Raymond was not practicing any conventional religion, we can say that Nature was his religion, and that this gave him the capacity to understand Wright and Japan at a latter stage in his life.

Despite this difference, both architects received a progressive education in which emphasized the development of creativity through the Arts. These common points in both architects education play a crucial role in their mutual understanding of architecture. Their separation was not due to a dispute on the fundamental goals and principles of architecture but rather on the modes of expression the architect should use to express these goals and principles. Raymond and Wright both had a romantic ideal, and a vital need for freedom, united as they were by a mystification of Nature.

2.3 Regarding Antonin Raymond's way of design

The study of the use and status of tatami in a series of Raymond's pre war designs

showed through which process Raymond operated a synthesis between Western and Japanese space in his residential. It revealed how during the first stage of his architectural development in Japan, Raymond adapted step by step, a system based on the tatami module to western style houses. Raymond was inspired in this way of design by his work at Taliesin while working on the American built house project, for which Wright had used a three feet module. However, while Wright used elements of Japanese architecture to serve the design of what was to stay fundamentally the American house", Raymond's attitude differed from that of his master. Being in Japan, Raymond was compelled, and willing to design for Japan. Regarding this particular point, we may say that the study of Karuizawa house showed that Raymond's intention was not to design a "Japanese house", nor to design according to formal codes of a Japanese traditional style such as Sukiya. It is important to understand that his intention was to design a "Modern house" in the context of Japan, that is to say, to extract elements of Japanese traditional architecture that he could use for the purpose of his design. This gave him freedom of design.

The identity of Antonin Raymond is embodied in the problematic of synthesis if we consider that the particularity of "synthesis" is to deal with the combination of elements which originally belong to background that are foreign to each other. The synthesis was made possible through a sense of the value of tradition, which in the perspective of modern architecture can be understood as the search for universal values. The synthesis is also guided by on the priority given to the relation between man and nature and the necessity to express this relationship through architecture. Finally, it is in the application of the principle of "simplicity" that Raymond found the way to operate a synthesis between his western background and the new modes of expression he discovered in Japan. The principle of "simplicity" was also a necessary tool for Raymond since the process of "synthesis" involves a certain level of complexity. It is only through the guidance on "simplicity" that Raymond could give universal value to his design.

2.4 Regarding the relationship between Antonin Raymond's way of thinking and way of design

The study of the relationship between Antonin Raymond's way of thinking and way of design provided the opportunity to show how Raymond's architectural discourse was illustrated in his design. However the study was limited to Karuizawa house. In the case of Karuizawa house, we could witness the coherence in the relationship between Raymond's way of thinking and way of design through the medium of the principle of "simplicity" which has emerged in this study as the core principle in Raymond's

architectural discourse.

In any case, the way of thinking and design if Antonin Raymond reflects a philosophy of architectural design which emphasises a type of approach to design, an outlook on architectural design where form is not a purpose in itself but the result of a set of principles which reflect certain values. In this sense, Raymond's way of design tends towards universality, because it is not contingent on trends and formal codes. This was a consequence of Raymond's realization that al design must be rooted in a philosophical purpose, or spiritual idea. This realization materialised in Raymond's endeavor to express the relationship between man and nature in his design for Karuizawa house. This realisation was Japan's most important contribution to Antonin Raymond's way of thinking and design.

3. Raymond and his mentors

Because of the various "stylistic" phase Raymond crossed, his work is often associated to that of other modern architecture, the most famous being Frank Lloyd Wright and le Corbusier. As we have seen during the course of the study, their influence on Antonin Raymond is undeniable. However there are some fundamental distinctions that need to be clearly stated. The main common point between Raymond and Le Corbusier is chiefly their desire to create modern architecture, as representative of its contemporary society. However le Corbusier was above all a visionary, and was preoccupied by the large scale issues of technology, mass production and the machine. Raymond could not have been preoccupied with these issues on the same scale in the context of Japan, his spiritual outlook on Nature an his way of thinking did not make him inclined to the rationalist and abstract aspect of Le Corbusier approach to modern architecture.

Regarding Frank Lloyd Wright, we have seen that the two architects were deeply connected in their conception of modern architecture. However, in comparison to Raymond, Wright was often and increasingly throughout his architectural career concerned with formal issues that Raymond rejected from an early stage of his architectural development. Furthermore, Wright's purpose was essentially to create the ultimate version of "the American house". In this aspect he can be considered as a regionalist architect. .While Wright might have in principle aspired to the expression of universal values like Raymond, the development of his "mannerism" had the opposite effect, and rather emphasized his own personality. On the contrary Raymond endeavoured to express universal values that he considered to be at the root of true and beautiful architecture, which as we have seen explains partly his allegiance to the

principle of “simplicity”.

4. Significance of the findings

This thesis has contributed to a deepening of knowledge on the Czech born architect who worked in Japan Antonin Raymond, and on the phenomenon of cultural synthesis expressed in architecture, which is not only an issue of the past, but also a contemporary one. The particularity of the point of view defended in this thesis in regards to the analysis of the architect’s way of thinking and design, is that it considers the building as starting point of analysis, rather than circumstances. A privileging of circumstances characterizes the historical approach while the approach that has been used in the present thesis is that of an architect.

The significance of the research in terms of findings lies in the articulation of a new concept for the definition of a medium for the analysis of the creative process behind architectural design. This concept is the “Architectural Identity”.

The second significant contribution of this thesis is the creation of a database of Raymond’s pre-war residential projects, which compiles valuable architectural and graphic data. This data has not been used to its full potential in this thesis, but it constitutes a solid and precious base for further research on the work of Antonin Raymond.

5. Future development of the research

The future development of this research is directly connected to the articulation of the new concept of “Architectural Identity” and the creation of the database compiling prewar residential works by Antonin Raymond. These two elements constitute the basic tools in architectural studies, particularly in the field of Architecturology. The fact that there creation was necessary to answer the thesis question, proves that they were lacking in previous dissertations or works dealing with the subject of Antonin Raymond. Nevertheless, the concept of “Architectural Identity” can be further explored, and applied to the study of different areas of Raymond’s work, or to different architects.

The electronic database of Raymond’s pre-war works creates potential for further study in the field of architectural history, theory and design.

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- *The Architectural Discourse of Antonin Raymond – A study of the nature of Antonin Raymond's writings*,「アントニン・レーモンドの著述における建築言説の研究」, 日本建築学会大会第 2006 年度大会（関東）, Summaries of technical papers of annual meeting, Architectural history and theory, Architectural Institute of Japan, Tokyo, September 2006, pp. 531-532.

- *The "Architect" in Antonin Raymond's way of thinking – A definition based of the architect's own words*, Japanese Architectural Association Journal of Asian Architecture and Building Engineering, vol. 5, No. 2, November 2006, pp. 245-251.

- *Antonin Raymond, a Modern Architect in Japan – Synthesis and conception of space in the residential architecture of Antonin Raymond from 1921 to 1938*,「日本の近代建築家　アントニン・レーモンド – 1921-1938 アントニン・レーモンドの日本住宅建築におけるシンテシスと建築理念」, 日本建築学会大会第 2005 年度大会（近畿）, Summaries of technical papers of annual meeting, Architectural history and theory, Architectural Institute of Japan, Osaka, September 2005, pp. 731-732.

- 「 XY の住宅」, "XY House", text and design project in collaboration with Benoît Jacquet, in TAKEYAMA Sey, 独身者の住まい, Kôsaidô shuppan, Tokyo, 2002, p. 289.

APPENDIX

APPENDIX 1: WORKS BY ANTONIN RAYMOND PUBLISHED IN JAPAN*

*This list contains most of the projects published in Japan, however it does not claim to include absolutely all the publications.

0.	Date	Project	Location	Publication	Publication Location	Documents
1.	1920-21 Taisho 9-10	Chitose Kindergarden	Yamagata, Yamagata prefecture			
2.	1921 Taisho 10	**Tanaka house**	Tokyo	A. R.: An Autobiography, 1973, Rutland, Vt.: Charles E. Tuttle, p.80	K. Univ. Archi. School. Lib.	Photo, plan.
3.	1921-22 Taisho 10-11	Tokyo Lawn Tennis Club (burned)	Chiyoda-ku, Tokyo	A. R.: An Autobiography, p.80 Kenchiku, April 1962, Tokyo, p.28 (dated 1920)	K. Univ. Archi. School. Lib.	Photos. Photos, plan
4.	1921-24 Taisho 10-13	Hoshi Commercial School	Shinagawa-ku, Tokyo	A. R.: An Autobiography, p.81-82	K. Univ. Archi. School. Lib.	Photos, plan, section
5.	1921-1924 Taisho 10-13	W.C.C. House for professor, House for Mrs. Yasui	Suginami-ku, Tokyo	A. R.: An Autobiography, p.86	K. Univ. Archi. School. Lib.	Photos
6.	1921-23 Taisho 10-12	**Shinpei Goto house (burned)**	Minato-ku	A. R.: An Autobiography, p.84	K. Univ. Archi. School. Lib.	Photos, plans, rendering.
7.	1921 Taisho 10	Tokyo Women's Christian College (W.C.C.) Master Plan	Suginami-ku, Tokyo	A. R.: An Autobiography, p.85	K. Univ. Archi. School. Lib.	Photo, bird's eye rendering, model.
8.	1921-23 Taisho 10-12	W.C.C. Dormitory & Kitchen	Suginami-ku, Tokyo			
9.	1921-24 Taisho 10-13	W.C.C. Classroom Bldg., Gumnasium, House for professor, House for Mrs. Yasui	Suginami-ku, Tokyo			
10.	1921-27 Taisho 10-16	W.C.C. Science Classrooms	Suginami-ku, Tokyo			
11.	1921-31 Taisho 10-	W.C.C. Library	Suginami-ku, Tokyo			
12.	1922-23 Taisho 11-12	**Kikusaburo Fukui House (burned)**	Minato-ku, Tokyo	A. R.: An Autobiography, p.86	K. Univ. Archi. School. Lib	Photo, plans.
13.	1922-23 Taisho 11-12	Andrews & George Co. Showroom & Office Bldg. (destroyed)	Osaka	A. R.: An Autobiography, p.87	K. Univ. Archi. School. Lib.	Photo, plans
14.	1923 Taisho 12	National Cash Register (temporary building)	Tokyo	A. R.: An Autobiography, p.87	K. Univ. Archi. School. Lib.	Photo.
15.	1923 Taisho 12	**Paul Claudel House (burned)**	Chiyoda-ku, Tokyo	A. R.: An Autobiography, p.101	K. Univ. Archi. School. Lib.	Photo.
16.	1923-24 Taisho 12-13	**Reinanzaka House I (moved)**	Minato-ku, Tokyo	A. R.: An Autobiography, p.104	K. Univ. Archi. School. Lib.	Photos.
17.	1923-24 Taisho 12-13	**Reinanzaka House II (destroyed)**	Minato-ku, Tokyo	The Japan Architect 33, spring 1999, Tokyo, p. 24-28	K. Univ. Archi. School. Lib.	Photos, plans, sections, elevations. Photos, plans.

				Kenchiku, Oct. 1961, Tokyo, p.74;75		
18.	1924 Taisho 13	National Cash Register (permanent building)	Tokyo	A. R.: An Autobiography, p.87	K. Univ. Archi. School. Lib.	Perspective rendering.
19.	1924 Taisho 13	**Dr. Read House (remodeled)**	Minato-ku, Tokyo	A. R.: An Autobiography, p.103 Kenchiku, April 1962, p.28	K. Univ. Archi. School. Lib.	Plans, photo. Photos, plans.
20.	1924-25 Taisho 13-14	Convent & School for the Sisters of Notre Dame (Seishin Gakuin)	Minato-ku, Tokyo	A. R.: An Autobiography, p.109	K. Univ. Archi. School. Lib.	Photos, plan.
21.	1924-25 Taisho 13-14	**A.P. Tetens House**	Ota-ku, Tokyo	A. R.: An Autobiography, p.108 Kenchiku, April 1962, p.30 (dated 1924)	K. Univ. Archi. School. Lib.	Photo, plan. Photo, plans, section.
22.	1925 Taisho 14	Hotel Kamakura (project)	Kamakura, Kanagawa Prefecture			
23.	1925 Taisho 14	Siber Hegner Warehouse (destroyed)	Naka-ku, Yokohama			
24.	1926 Taisho 15	Seishin Gakuin	Kobe	A. R.: An Autobiography, p.111	K. Univ. Archi. School. Lib.	Plan, bird's eye rendering.
25.	1926-29 Taisho 15-18	Rising Sun Petroleum Co. of NY Office Bldg. (destroyed)	Naka-ku, Yokohama			
26.	1926-27 Taisho 15-16	School & Convent for the Sisters of notre Dame, Seishin Gakuin	Takarazuka, Hyogo Prefecture			
27.	1926-27 Showa 1-2	**Viscountess Hamao House** (destroyed)	Tokyo	A. R.: An Autobiography, p.118 Kenchiku, April 1962, p.29	K. Univ. Archi. School. Lib.	Photo, plan. Photos, plan.
28.	1926-30 Showa 1-5	Toyo Steel Product Co. Office Bldg. (destroyed)	Kawasaki, Kanagawa Prefecture			
29.	1927-28 Showa 2-3	Standard oil Co. of New York Bldg. (destroyed)	Naka-ku, Yokohama			
30.	1927-29 Showa 2-4	Rising Sun Petroleum Co. Housing (destroyed partially)	Naka-ku, Yokohama			
31.	1928 Showa 3	**Italian Embassy Nikko Villa**	Nikko, Tochigi Prefecture	The Japan Architect 33, spring 1999, Tokyo, p. 36-44 A. R.: An Autobiography, p.120 Kenchiku, April 1962, p.29	K. Univ. Archi. School. Lib.	Photos, plans. Photo, plans. Photos, plan.
32.	1928-30 Showa 3-5	School & Convent for the Sisters of the Sacred Heart, Seishin Jogakuin	Okayama, Okayama Prefecture	A. R.: An Autobiography, p.110	K. Univ. Archi. School. Lib.	Photo, plan.
33.	1928-30 Showa 3-5	French Embassy (burned)	Minato-ku, Tokyo	Shinkenchiku Vol.9 1933, p.105-109	K. Univ. Archi. School. Lib.	
34.	1928-30 Showa 3-5	Dunlop Rubber Co. Factory	Kobe, Hyogo Prefecture			
35.	1928-31 Showa 3-6	American Embassy with H. Van Burren Magonigle (destroyed)	Minato-ku, Tokyo			
36.	1928-33 Showa 3-8	St. Luke's Hospital, Last Scheme	Chuo-ku, Tokyo	A. R.: An Autobiography, p.112	K. Univ. Archi. School. Lib.	Plan, Perspective rendering.
37.	1929 Showa 4	St. Luke's Hospital, Last Scheme (original design)	Chuo-ku, Tokyo	A. R.: An Autobiography, p.112	K. Univ. Archi. School. Lib.	Perspective rendering.
38.	1929-30 Showa 4-5	Soviet Embassy (destroyed)	Minato-ku, Tokyo	Shinkenchiku Vol.7 1931, p.1-18	K. Univ. Archi. School. Lib.	

39.	1930-31 Showa 5-6	Rising Sun Service Station (destroyed)	Toshima-ku, Tokyo			
40.	1930-31 Showa 5-6	Rising Sun office (destroyed)	Yokohama, Kanagawa Prefecture	Shinkenchiku Vol.7 1931, p.208-215 A. R.: An Autobiography, p.125	K. Univ. Archi. School. Lib.	Photos, plans. Photo.
41.	1930-32 Showa 5-7	Tokyo Golf Club (changed by U.S. Army, destroyed)	Asaka, Saitama Prefecture	Shinkenchiku Vol. 8 1932, p.329-340 The Japan Architect 33, spring 1999, Tokyo, p. 114; 115 Kenchiku, Oct. 1961, p.76	K. Univ. Archi. School. Lib.	Photos, plan, sections. Photos, plan, sections. Model, Plan.
42.	1931 Showa 6	**Shiro Akaboshi Villa (moved)**	Fujisawa, Kanagawa Prefecture	Kenchiku, April 1962, p.30		Photos, plan, section.
43.	1931 Showa 6	**Residence of the Risingsun Oil Co. Ltd.**	Yokohama	Shinkenchiku Vol. 7 1931, p.144-147	K. Univ. Archi. School. Lib.	Photos, plans.
44.	1931 Showa 6	Nippon Ko-ai Co. Ltd.	Tokyo	Shinkenchiku Vol. 8 1932, p.87-90	K. Univ. Archi. School. Lib.	Photos, plan, elevation.
45.	1931 Showa 6	**Troedsson Villa**	Nikko, Tochigi Prefecture	The Japan Architect 33, spring 1999, Tokyo, p. 44-50 Kenchiku, April 1962, p.31	K. Univ. Archi. School. Lib.	Photos, plan. Photos, plan.
46.	1931-33 Showa 6-8	Fujisawa Golf Club	Kanagawa Prefecture	Shinkenchiku Vol. 8 1932, p.185-191	K. Univ. Archi. School. Lib.	Photos, plans, elevations.
47.	1932 Showa 7	**Kisuke Akaboshi House**	Sinagawa-ku, Tokyo	A. R.: An Autobiography, p.135	K. Univ. Archi. School. Lib.	Photos, section.
48.	1932 Showa 7	**Viscount T. Soma House (project)**	Tokyo			
49.	1932 Showa 7	Toyo Otis Elevator Co. (destroyed)	Ota-ku, Tokyo	Shinkenchiku Vol. 9 1933, p.27-30	K. Univ. Archi. School. Lib.	Photos.
50.	1932-33 Showa 7-8	**Dr. H. & M. Hatoyama House**	Bunkyo-ku, Tokyo	Shinkenchiku Vol. 9 1933, p. 169-175	K. Univ. Archi. School. Lib.	Photos, plans.
51.	1933 Showa 8	**Summer House at Karuizawa (moved, now Paynet Museum)**	Karuizawa, Nagano Prefecture	Shinkenchiku Vol. 9 1933, p.185-188 The Japan Architect 33, spring 1999, Tokyo, p. 28; 29 Architectural Records 75, 1934, p432-437 A. R.: An Autobiography, p.130 Kenchiku, Oct. 1961, Tokyo, p.78;79	K. Univ. Archi. School. Lib.	Photos, plans, section, elevation. Photos, plans, sections. Photos, plans, section.
52.	1933-34 Showa 8-9	**Morinosuke Kawasaki house (destroyed)**	Minato-ku, Tokyo	Shinkenchiku Vol. 11 1935, p. 1-9 The Japan Architect 33, spring 1999, Tokyo, p. 54; 55 A. R.: An Autobiography, p.136	K. Univ. Archi. School. Lib	Photos, plans, section. Photos, plans, section. Photos, plan.
53.	1933-34 Showa 8-9	**Kodera Summer Cottage**	Karuizawa, Nagano Prefecture	The Japan Architect 33, spring 1999, Tokyo, p. 50-54 A. R.: An Autobiography, p.139 Kenchiku, April 1962, p.32 (dated 1934)	K. Univ. Archi. School. Lib.	Photos, plan, section, elevation Photos. Photos, plan.
54.	1933-34 Showa 8-9	**Tetsuma Akaboshi house**	Tokyo	Shinkenchiku Vol. 11 1935, p.161-168 The Japan Architect 33, spring 1999, Tokyo, p. 56; 57 A. R.: An Autobiography, p.138	K. Univ. Archi. School. Lib.	Photos, plans, elevations, details Photos, plans, elevations, details Photos, plan.

				Kenchiku, Oct. 1961, p.77		Photos, plans.
55.	1934 Showa 9	**Oka Villa**	Karuizawa, Nagano Prefecture	Shinkenchiku Vol. 10 1934, p.166-168 Kenchiku, April 1962, p.32	K. Univ. Archi. School. Lib.	Photos, plans, elevations, sections. Photos, plan.
56.	1934 Showa 9	Brazil Coffee Shop (destroyed)	Chuo-ku, Tokyo			
57.	1934 Showa 9	Gymnasium for Seibo Jogakuin	Korien, Osaka			
58.	1934-35 Showa 9-10	St. Paul's Catholic Church	Karuizawa, Nagano Prefecture	The Japan Architect 33, spring 1999, Tokyo, p. 78-82 Kenchiku, Oct. 1961, p.63; 65	K. Univ. Archi. School. Lib.	Photos, plan, sections. Photos, plan
59.	1934-36 Showa 9-11	**K. Fukui Villa (destroyed)**	Atami, Sizuoka Prefecture	A. R.: An Autobiography, p.137	K. Univ. Archi. School. Lib.	Photos.
60.	1934-37 Showa 9-12	Tokyo Women's Christian College Chapel & Auditorium	Suginami-ku, Tokyo	Shinkenchiku Vol. 14 1938, p.200-207 The Japan Architect 33, spring 1999, Tokyo, p. 84-90 Kenchiku, Oct. 1961, p.80; 81	K. Univ. Archi. School. Lib.	Photos, plans, sections. Photos, plans, section, elevation Photos, plan, section
61.	1935 Showa 10	**Keller House**	Minato-ku, Tokyo	Shinkenchiku Vol. 14 1938, p.114-123 Kenchiku, April 1962, p.33	K. Univ. Archi. School. Lib.	Photos, plans. Photos, plans, section.
62.	1935 Showa 10	**D.H. Blake House (burned)**	Shibuya-ku, Tokyo	Kenchiku, April 1962, p.34; 35	K. Univ. Archi. School. Lib.	Photos, plans, section.
63.	1935 Showa 10	**Walker Villa**	Karuizawa, Nagano prefecture	Kenchiku, April 1962, p.35 (dated 1934)	K. Univ. Archi. School. Lib.	Photos, plans.
64.	1936 Showa 11	**Seibo Gakuin**	Osaka	A. R.: An Autobiography, p.110	K. Univ. Archi. School. Lib.	Photo, plan.
65.	1936 Showa 11	**General Nagaoka House**	Minato-ku, Tokyo			
66.	1936 Showa 11	**Oka House**	Setagaya-ku, Tokyo	Shinkenchiku Vol. 13 1937, p.382-386	K. Univ. Archi. School. Lib.	Photos, plans.
67.	1936 Showa 11	**Troedsson House**	Minato-ku, Tokyo	Kenchiku, April 1962, p.33 (dated 1935)	K. Univ. Archi. School. Lib.	Photos, plan.
68.	1936 Showa 11	Restaurant Fujiya	Naka-ku, Yokohama	Shinkenchiku Vol. 14 1938, p.108-113	K. Univ. Archi. School. Lib.	Photos, plans.
69.	1949-50 Showa 24-25	**Socony Residence** (R&R) (destroyed)	Honmoku, Naka-ku, Yokohama	Kenchiku, Oct. 1961, p.88	K. Univ. Archi. School. Lib.	Photos, plans.
70.	1949-50 Showa 24+25	**Socony Residence**	Yamate, Naka-ku, Yokohama	Kenchiku, Oct. 1961, p.89	K. Univ. Archi. School. Lib.	Photos, plans.
71.	1949-50 Showa 24-25	**Socony residence** (destroyed)	Isarago, Tokyo			
72.	1949-51 Showa 24-26	Reader's Digest office Building (R&R) (destroyed)	Chiyoda-ku, Tokyo	The Japan Architect 33, spring 1999, Tokyo, p. 116-120 Kenchiku Bunka 58, 1951, Tokyo, p. 3-13 Kenchiku, Oct. 1961, p.84-87	K. Univ. Archi. School. Lib.	Photos, plans, section, furniture. Photos, plans, elevations. Photos, plans.
73.	1950 Showa 25	**Keller House** (destroyed)	Minato-ku, Tokyo	Shinkenchiku Vol. 14, Tokyo, p.114-119	K. Univ. Archi. School. Lib.	Photos, plans.

74.	1950 (Publication) Showa 25	**Minimum house of flat roof** (destroyed)	Tokyo	Shinkenchiku Vol. 25, Sept. 1950, p.14 Kenchiku Bunka 208, Feb. 1964, p.138 Kenchiku, July 1961, p.10	K. Univ. Archi. School. Lib.	Photos, plan, elevation. Photo, plan. Photo, plan.
75.	1951 (Publication) Showa 25	**Residence of Standard Vacuum Oil Company**	Yokohama	Shinkenchiku Vol. 26, March. 1950, p.1 A. R.: An Autobiography, p.302	K. Univ. Archi. School. Lib.	Photos, plans, sections, elevations. Photos, plans
76.	1950-51 Showa 25-26	**Raymond House & Studio in Azabu** (Kogaityo office & House, destroyed)	Minato-ku, Tokyo	The Japan Architect, 33, spring 1999, Tokyo p. 30, 31 A. R.: An Autobiography, p.236 Kenchiku Bunka 71, Oct. 1952, Tokyo, p. 8-13 Kenchiku, Oct. 1961, p.90	K. Univ. Archi. School. Lib.	Photos, plan, section. Photos, plan, sections. Photos, plans, sections, elevations. Photos, plan
77.	1950-51 Showa 25-26	Nippon Gakki Seizo K. K. bldg., Yamaha Hall & Retail Shop	(Ginza) Chuo-ku, Tokyo	Kenchiku Bunka 79, May 1953, Tokyo, p. 1-8 Shinkenchiku Vol. 28, Jan. 1953, p.38-41 Kenchiku, Oct. 1961, p.92	K. Univ. Archi. School. Lib.	Photos, plans, section, elevation Photos, plans, section. Photo, plan, section.
78.	1950-51 Showa 25-26	**E.L. Healer House** (Lury house)	Shibuya-ku, Tokyo			
79.	1951-52 Showa 26-27	**Reader's Digest Manager's Residence**	Meguro-ku, Tokyo	Shinkenchiku Vol. 28, Jan. 1953, p.26 A. R.: An Autobiography, p.304	K. Univ. Archi. School. Lib.	Photos, plan, section, elevations. Photos, plans.
80.	1951-52 Showa 26-27	Mikimoto Pearl Shop & Office (destroyed)	Chuo-ku, Tokyo	Shinkenchiku Vol. 28, Dec. 1953, p.38-45	K. Univ. Archi. School. Lib.	Photos, plans.
81.	1951-52 Showa 26-27	**Harman House** (Sasaki, Shumaker)	Shibuya-ku, Tokyo	A. R.: An Autobiography, p.303	K. Univ. Archi. School. Lib.	Photos, plans.
82.	1951-52 Showa 26-27	Yodogawa Seiko Co. Office Bldg (R&R)	Kita-ku, Osaka	Kenchiku Bunka 72, Nov. 1952, Tokyo, p. 10-12	K. Univ. Archi. School. Lib.	Photos, plans, elevations.
83.	1951-52 Showa 26-27	The National City Bank of New York Bldg. (destroyed)	Naka-ku, Nagoya	Kenchiku Bunka 66, May 1952, Tokyo, p. 4-8 Kenchiku, Oct. 1961, p.93	K. Univ. Archi. School. Lib.	Photos, plans, elevations. Photos, plans.
84.	1951-52 Showa 26-27	U.S. Embassy Apartment (R&R) (Perry House, destroyed)	Minato-ku, Tokyo	Shinkenchiku Vol. 28, June 1953, p.1-13 Kenchiku, Oct. 1961, p.94; 95	K. Univ. Archi. School. Lib.	Photos, plans, sections. Photos, plans, sections.
85.	1951-53 Showa 26-28	MGM Tokyo Office Bldg. (destroyed)	Chuo-ku, Tokyo			
86.		U.S. Embassy Apartment (R&R) (Harris House, destroyed)	Minato-ku, Tokyo	Kenchiku Bunka 85, Dec. 1953, Tokyo, p. 16-19 Kenchiku, Oct. 1961, p.94; 95	K. Univ. Archi. School. Lib.	Photos, plans, sections, detail. Photos, plans, sections.
87.	1952-53 Showa 27-28	Tokyo Film Vault	Minato-ku, Tokyo	Kenchiku Bunka 79, May 1953, Tokyo, p. 12-13	K. Univ. Archi. School. Lib.	Photos, plans, sections.
88.	1952-53	MGM Nagoya Office Bldg.	Nagoya, Aichi Prefecture			

	Showa 27-28					
89.	1952 Showa 27	**Fusaichiro Inoue House**	Takasaki, Gunma Prefecture	The Japan Architect 33, spring 1999, Tokyo, p. 58-66	K. Univ. Archi. School. Lib.	Photos, plan, section, elevation
90.	1952 Showa 27	**Brower House**	Hayama, Kanagawa Prefecture			
91.	1952-53 Showa 27-28	**Hayata House**	Minato-ku, Tokyo	A. R.: An Autobiography, p.108 Kenchiku Bunka 85, Dec. 1953, Tokyo, p. 6-10	K. Univ. Archi. School. Lib.	Photos, plans. Photos, plans, elevations.
92.	1952-53 Showa 27-28	**E. Salomon House**	Meguro-ku, Tokyo	Shinkenchiku Vol. 28, Sept. 1953, p.22 Kenchiku Bunka 82, Sept. 1953, Tokyo, p. 6-9	K. Univ. Archi. School. Lib.	Photos, plans, elevations. Photos, plan, section, elevations.
93.	1953 Showa 28	Tokyo Film Exchange Corp. office bldg.	Kyobashi, Tokyo	Kenchiku Bunka 79, May 1953, Tokyo, p. 9-11	K. Univ. Archi. School. Lib.	Photos, plans, sections, elevations, detail.
94.	1953-54 Showa 28-29	Yasukawa Denki Bldg.	Yawatanishi-ku, Kitakyusu	Kenchiku Bunka 95, 1954, Tokyo, p. 1-7	K. Univ. Archi. School. Lib.	Photos, plan, elevation, detail.
95.	1953-54 Showa 28-29	P.S. Concrete prefabricated House	Musashino, Tokyo			
96.	1953-54 Showa 28-29	**A & B Houses**	Minato-ku, Tokyo	Kenchiku Bunka 96, 1954, Tokyo, p. 5-7 (B House)	K. Univ. Archi. School. Lib.	Photos, plans, sections, elevations.
97.	1953-54 Showa 28-29	**Claude Raymond House**	Minato-ku, Tokyo			
98.	1953-54 Showa 28-29	**Cunningham House**	Minato-ku, Tokyo	The Japan Architect 33, spring 1999, Tokyo, p. 66-72 A. R.: An Autobiography, p.306 Kenchiku Bunka 96, 1954, Tokyo, p. 8-10 Kenchiku Bunka 208, Feb. 1964, Tokyo, p.80	K. Univ. Archi. School. Lib.	Photos, plans, sections. Photos, plan Photos, plans, sections, elevations. Photos, plans, section.
99.	1954 Showa 29	**Peter J. Dorrance House**	Minato-ku, Tokyo	Kenchiku Bunka 96, 1954, Tokyo, p. 1-4	K. Univ. Archi. School. Lib.	Photos, plan, elevation.
100.	1954 Showa 29	**Harada House**	Minato-ku, Tokyo	Kenchiku Bunka 106, Sept. 1955, Tokyo, p. 22-24	K. Univ. Archi. School. Lib.	Photos, plans.
101.	1954 Showa 29	Small Housing Group	Itabashi-ku, Tokyo			
102.	1954-55 Showa 29-30	St. Anselm's Meguro Church	Meguro-ku, Tokyo	The Japan Architect 33, spring 1999, Tokyo, p. 90~97 Kenchiku Bunka 117, Aug. 1956, Tokyo, p. 19-25 Kenchiku, Oct. 1961, p.96; 97	K. Univ. Archi. School. Lib.	Photos, plan, section, elevation Photos, plans, sections, elevation, detail. Photos, plans, sections
103.	1954-55 Showa 29-30	**Morimura House**	Meguro-ku, Tokyo	Kenchiku Bunka 106, Sept. 1955, Tokyo, p. 25-28	K. Univ. Archi. School. Lib.	Photos, section, elevations.

104.	1955 Showa 30	Two proposals for construction of school bldgs.	project	Kenchiku Bunk, 106, Sept. 1955, Tokyo, p. 29-30	K. Univ. Archi. School. Lib.	
105.	1955 Showa 30	Yakumo primary school		Kenchiku Bunka 106, Sept. 1955, Tokyo, p. 31-32	K. Univ. Archi. School. Lib.	
106.	1955-56 Showa 30-31	St. Alban's Church	Minato-ku, Tokyo	Kenchiku Bunka 117, Aug. 1956, Tokyo, p. 31-34	K. Univ. Archi. School. Lib.	Photos, plan, section, elevation, details.
107.	1955-56 Showa 30-31	Yawata steel Mill Co. Memorial Gymnasium	Yawata, Fukuoka Prefecture	Kenchiku Bunka 112, March 1956, Tokyo, p. 5-11	K. Univ. Archi. School. Lib.	Photos, plans, sections, details.
108.	1955-56 Showa 30-31	St. Patrick's Church	Toshima-ku, Tokyo	Kenchiku Bunka 117, Aug. 1956, Tokyo, p. 26-30	K. Univ. Archi. School. Lib.	Photos, plans, section, elevations.
109.	1956 Showa 31	**Dorrance House** (Hjorth's)	Minato-ku, Tokyo	A. R.: An Autobiography, p.307	K. Univ. Archi. School. Lib.	Photo, plan.
110.	1957 Showa 32	Nobeoka Lutheran Church (destroyed)	Nobeoka, Miyazaki Prefecture			
111.	1957-58 Showa 32-33	**Hayama Villa** (destroyed)	Hayama, Kanagawa Prefecture	Shinkenchiku Vol. 33 Dec. 1958, p.40-45; 80-81 The Japan Architect 33, spring 1999, Tokyo, p. 32; 33 A. R.: An Autobiography, p.108	K. Univ. Archi. School. Lib.	Photos, plans, sections, elevations, details Photos, plans, section, elevations. Photos, plans.
112.	1957-58 Showa 32-33	Yawata Steel Mill Co. Recreation Center	Yawata, Fukuoka Prefecture	Shinkenchiku Vol. 33, Nov. 1958, Tokyo, p.8-15	K. Univ. Archi. School. Lib.	
113.	1957-58 Showa 32-33	Fuji Country Club House	Gotenba, Shizuoka Prefecture			
114.	1958-59 Showa 33-34	**Ito House**	Minato-ku, Tokyo	The Japan Architect 33, spring 1999, Tokyo, p. 7273 A. R.: An Autobiography, p.311 Kenchiku Bunka 152, June 1959, Tokyo, p. 16-19	K. Univ. Archi. School. Lib.	Photos, plan, sections, elevation. Photos, plan. Photos, plans, section, elevation
115.	1958-61 Showa 33-36	Gunma Music Center (F.A.I.A.)	Takasaki, Gunma Prefecture	The Japan Architect 33, spring 1999, Tokyo, p. 120-126 Kenchiku Bunka 180, Oct. 1961, p.45-48	K. Univ. Archi. School. Lib.	Photos, plan, section. Photos, plans, elevations, section.
116.	1959 Showa 34	Yamashita House	Setagaya-ku, Tokyo	Kenchiku Bunka 180, Oct. 1961, p.23-45	K. Univ. Archi. School. Lib.	Photos, plans, models.
117.	1959 Showa 34	Master Plan for I.C.U.	Mitaka, Tokyo			
118.	1960 Showa 35	Mountain House	Mt Hino, Fukuoka Prefecture	The Japan Architect, June 1960, Tokyo, p. 10-20	K. Univ. Archi. School. Lib.	Photos, plans, section.
119.	1960 Showa 35	Sakuragaoka Golf Club House	Minamitma, Tokyo	The Japan Architect, Oct. 1999, Tokyo, p. 40-49	K. Univ. Archi. School. Lib.	Photos, plans, section.
120.	1959-60 Showa 35	I.C.U. Library	Mitaka, Tokyo	The Japan Architect, Jan. 1961, Tokyo, p. 31-35 Kenchiku, Oct. 1961, p.98; 99	K. Univ. Archi. School. Lib.	Photos, plans, section, details. Photos, plans.
121.	1959-60 Showa 35	Imperial Iranian Embassy (R&R)	Minato-ku, Tokyo			
122.	1959-60 Showa 35	**Kestenbaum House**	Meguro-ku, Tokyo			

123.	1959-60 Showa 35	**I.C.U. Kleinjan House**	Meguro-ku, Tokyo			
124.	1959-60 Showa 35	Rikkyo High School	Shiki, Saitama Prefecture			
125.	1959-60 Showa 34-35	Moji Golf Club	Kitakyusyu, Fukuoka Prefecture			
126.	1960 Showa 35	**D. Kawasaki House**	Meguro-ku, Tokyo			
127.	1960 Showa 35	**Residence No.2 for Rikkyo High School**	Niiza, Saitama Prefecture	Shinkenchiku Vol. 36, May 1961, p.81-86	K. Univ. Archi. School. Lib.	Photos, plan, elevations.
128.	1960 Showa 35	Office Building Reborn, KLM New Headquarters (R&R)	New York, NY			
129.	1960 (Publication) Showa 35	**kanekutsu house**	Tokyo	Shinkenchiku Vol. 35, June 1960, p.57-63 + detail p.77 Japan Architect, July 1960, p55-61	K. Univ. Archi. School. Lib.	Photos, plans, elevations. Photos, plans, elevations.
130.	1961 Showa 36	Holy Cross Church	Setagaya-ku, Tokyo	Kenchiku, Oct. 1961, p.72-73	K. Univ. Archi. School. Lib.	Photos, plan, section.
131.	1961 Showa 36	Rikkyo High School	Siki, Saitama Prefecture			
132.	1961 Showa 36	**Residence No.3 for Rikkyo High School**	Siki, Saitama Prefecture	Shinkenchiku Vol. 37, June 1962, p.123-128	K. Univ. Archi. School. Lib.	Photos, plan, elevations.
133.	1961 Showa 36	St. Micheal's Church	Sapporo, Hokkaido			
134.	1961 Showa 36	Chapel for Holy Ghost Hospital (project)	Nagoya, Aichi Prefecture	Kenchiku, Oct. 1961, p.100	K. Univ. Archi. School. Lib.	Plan, perspective, elevation.
135.	1961-63 Showa 36-38	St. Paul's Church for Rikkyo Gakuin (F.A.I.A.)	Niiza, Saitama Prefecture	The Japan Architect 33, spring 1999, Tokyo, p. 98-102 Kenchiku Bunka 207, Jan. 1964, p.77-82	K. Univ. Archi. School. Lib.	Photos, plans, sections. Photos, plan, section.
136.	1962 Showa 37	Nanzan University Master Plan	Showa-ku, Nagoya	Shinkenchiku Vol. 39, Sept. 1964, p.116 Kenchiku Bunka 215, Sept. 1964	K. Univ. Archi. School. Lib.	
137.	1962 Showa 37	**New Karuizawa Studio**	Karuizawa, Nagano Prefecture	The Japan Architect 33, spring 1999, Tokyo, p. 10-21 A. R.: An Autobiography, p.313-314	K. Univ. Archi. School. Lib.	Photos, plans, details, furniture. Photos, plan, section.
138.	1962-63 Showa 37-38	Tokyo Golf Club	Sayama, Saitama Prefecture	The Japan Architect 33, spring 1999, Tokyo, p. 126-130	K. Univ. Archi. School. Lib.	Photos, plans, sections, elevations.
139.	1962-63 Showa 37-38	**Price House**	Takarazuka, Hyogo Prefecture	A. R.: An Autobiography, p.312	K. Univ. Archi. School. Lib.	Photos, plan.
140.	1962-64 Showa 37-39	Nanzan University Classroom Buildg., Faculty Office Bldg., Library, Dining Room & Student Hall, Administration Bldg.	Showa-ku, Nagoya			
141.	1963 Showa 38	**H. Ito House**	Ota-ku, Tokyo			
142.	1963-64 Showa 38-39	S.V.D. Fathers Monastery	Shibuya-ku, Tokyo			
143.	1963-64	Matsuzakaya Dept. Store Complete	Chuo-ku, Tokyo			

	Showa 38-39	Remodeling with Nikken (destroyed)				
144.	1963 Showa 38	Tokyo Bishop Diocesan's Office	Minato-ku, Tokyo			
145.	1964 Showa 39	Ristorante Italiano	Chuo-ku, Tokyo			
146.	1964-66 Showa 39-41	Divine World Seminary	Showa-ku, Tokyo	The Japan Architect 33, spring 1999, Tokyo, p. 110-114	K. Univ. Archi. School. Lib.	Photos, plans, section.
147.	1965 Showa 40	**The Rikkyo High School Instructor's Home No.4**	Niiza, Saitama Prefecture	Shinkenchiku Vol. 40, Sept. 1965, p.191-195	K. Univ. Archi. School. Lib.	Photos, plans, sections.
148.	1965 Showa 40	San Carlos University (project)	Cebu, Philippines			
149.	1965 Showa 40	Shibata Catholic Church	Shibata, Niigata Prefecture	The Japan Architect 33, spring 1999, Tokyo, p. 102-110	K. Univ. Archi. School. Lib.	Photos, plan, elevation, section
150.	1965-66 Showa 41	**Adachi Villa**	Karuizawa, Nagano Prefecture	The Japan Architect 33, spring 1999, Tokyo, p. 74-78 Shinkenchiku, p198-206 A. R.: An Autobiography, p.314	K. Univ. Archi. School. Lib. K. Univ. Archi. School. Lib. K. Univ. Archi. School. Lib.	Photos, plan. Photos, plan.
151.	1966 Showa 41	A Chapel & Lecture Hall for the Rikkyo Primary School	Toshima-ku, Tokyo			
152.	1966-68 Showa 41-43	Nagoya International School	Moriyama-ku, Nagoya			
153.	1966 Showa 41	St. Andrew's Cathedral (project)	Minato-ku. Tokyo			
154.	1966-67 Showa 41-42	Kindergarten & Priory for St. Mary Convent	Chiba, Chiba Prefecture			
155.	1968 (Publication) Showa 43	Japan Keirin College		Kenchiku Bunka 265, Nov. 1968, Tokyo, p.98-104	K. Univ. Archi. School. Lib.	Photos, plans, section.
156.	1968 Showa 43	Building Six and Seven, Sophia University with Takenaka	Shinjuku-ku, Tokyo			
157.	1969 Showa 44	Pan Pacific Forum, University of Haway (project)	Honolulu, Haway			
158.	1969 Showa 44	**Maersk Line Manager's House**	Naka-ku, Yokohama			

APPENDIX 2: HOUSES DESIGNED BETWEEN 1921 AND 1938 IN JAPAN*

*See Antonin_Raymond_Database CD-ROM for detailed information. Detailed information is available in appendix 2 for the houses written in **Bold** style.

	Date	Client / House name	Condition	Location	structure
1.	1921 Taisho 9	Reverend Dewees Franklin Singley / シングリー牧師		Morioka, Iwate Pref.	
2.	1921 Taisho 9	Brady /ブラジィ			
3.	1921 Taisho 9	O. Matsukata / 松形 O.			
4.	**1921 Taisho 10**	**Heihachi Tanaka / 田中 平八**	**Destroyed by fire**	**Tokyo**	**Wood frame and stucco**
5.	1921-1922 Taisho 10-11	Hajime Kawasaki / 川崎 ハジメ	Destroyed by fire	Hayama, Kanagawa Pref.	
6.	1921-1923 Taisho 10-12	Lydia A. Lindsey and Kate I. Hansen (Reformed Church, U.S. Board of Foreign Missions) リジャ A. リンジィとケイト I.ハンセン	Destroyed by fire in 1944	Sendai, Miyagi Pref.	
7.	1921-1923 Taisho 10-12	John Richard Geary ジョン・イッチャード・ギアリー	Destroyed by fire	Yokohama	
8.	**1921-23 Taisho 10-12**	**Baron Goto Shinpei 後藤 新平 男爵**	**Destroyed by fire**	**Moto Azabu, Minato-ku, Tokyo**	**Reinforced concrete**
9.	1921-24 Taisho 10-13	Prof. Kō (Tokyo Women's Christian College) 公先生 (東京女子大学)		Kichijoji, Suginami-ku, Tokyo	
10.	1921-24 Taisho 10-13	Prof. Yasui (Tokyo Women's Christian College) 安井先生 (東京女子大学)	Extant		
11.	1921 Taisho 9	J. Nakamigawa ナカミガワ J.	Destroyed by fire	Tokyo	
12.	1922 Taisho 11	Paul Messer ポール・メッサー	Destroyed by fire	Yokohama	
13.	**1922-23 Taisho 11-12**	**Kikusaburō Fukui 福井 菊三郎**	**Destroyed by fire**	**Shibuya-ku, Tokyo**	**Oya stone pile, reinforced concrete and brick**
14.	1922-23 Taisho 11-12	Reverend Jairus O. Moore (Reformed Church, U. S. Board of Foreign Missions) ムアー牧師	Destroyed	Sendai, Miyagi Pref.	
15.	1922-26 Taisho 11-Shōwa 1	Dr. August Karl Reischauer (Tokyo Women's Christian College) ライシャワー博士 (東京女子大学)		Kichijoji, Suginami-ku, Tokyo	
16.	1923 Taisho 12	Reverend F. W. Steadman (American Baptist Foreign Mission) ステッドマン牧師		38 Ichimaru, Morioka, Iwate Pref.	
17.	1923 Taisho 12	Ōhashi 大橋		Ōmori, Ota-ku, Tokyo	

18.	1923 Taisho 12	C. P. Garman C. P. ガーマン	Destroyed by fire	Nakashibuya, Tokyo	
19.	1923 Taisho 12	Hoshi 星		Kamakura, Kanagawa Pref.	
20.	1923 Taisho 12	“Ready cut house” レディカットハウス			
21.	1923 Taisho 12	Andrews アンドルーズ			
22.	1923 Taisho 12	Hans Hunter ハンス・ハンター		Tokyo	
23.	1923-24 Taisho 12-13	Paul Claudel (French ambassador’s residence) ポール・クロデル (フランス大使の家)	Destroyed by fire	Hitotsubashi, Chiyoda-ku, Tokyo	Wood
24.	1924 Taisho 13	Antonin and Noémi Raymond アントニンとノエミ レーモンド	Moved to Hayama in 1925, then demolished	Akasaka, Minato-ku, Tokyo	Wood
25.	**1924 Taisho 13**	**Dr. Rachel Read レイチェル・リード先生**	**Destroyed**	**Akasaka, Minato-ku, Tokyo**	**Wood**
26.	1924 Taisho 13	S. Kondo コンド S.	Destroyed	Tokyo	
27.	1924 Taisho 13	K. Kagaya カガヤ K.			
28.	1924 Taisho 13	Owstone オウストーン		Yokohama	
29.	1924 Taisho 13	R. M. Andrews R. M. アンドルーズ			
30.	1924 Taisho 13	Nipkow ニップコヴ		Yokohama	
31.	1924 Taisho 13	Akaboshi (I) 赤星			
32.	1924 Taisho 13	Akaboshi (II) 赤星			
33.	1924 Taisho 13	Murai ムライ			
34.	1924 Taisho 13	“Loftus Bungalow” ロフタス・バンガロー			
35.	1924 Taisho 13	Kirkpatrick キルクパトリク			
36.	1924 Taisho 13	Rodriguez ロドリゲズ			
37.	**1924-25 Taisho 13-14**	**A.P. Tetens A. P. テテンス**		**Ōmori, Ota-ku, Tokyo**	**Reinforced concrete**
38.	1924-25 Taisho 13-14	Benzō Mitsui 三井 弁蔵		Komazawa, Setagaya-ku, Tokyo	
39.	**1924-25 Taisho 13-14**	**Kōshaku Hagiwara 萩原 公爵**	**Destroyed**	**Tokyo**	
40.	**1924-26 Taisho 13-Shōwa 1**	**Antonin and Noémi Raymond (Reinanzaka house) アントニンとノエミ レーモンド (霊南坂邸)**	**Demolished in 1994**	**Akasaka, Minato-ku, Tokyo**	**Reinforced concrete**
41.	1924-27 Taisho 13-Shōwa 2	Fritz Ehrismann フリッズ・エーリスマン	Extant	1-77-4 Motomachi, Naka-ku, Yokohama	Wood

42.	1925 Taisho 14	Walser ウオルサー		Tokyo	
43.	1925 Taisho 14	Alexander Sykes アレックサンダー・サイクス			
44.	1925 Taisho 14	Chartered Bank チャータード・バンク	Destroyed	Yokohama	
45.	1925 Taisho 14	Count Aisuke Kabayama 樺山 アイスケ伯爵			
46.	1925 Taisho 14	Rising Sun Petroleum Co. (General manager's residence) ライジングサン石油 (総支配住宅)		Negishi, Yokohama	
47.	**1925-26 Taisho 14-Shōwa 1**	**Russell ラッセル**	**Destroyed**	**Yokohama**	
48.	1926 Shōwa 1	Inoue (I) 井上			
49.	1926 Shōwa 1	Inoue (II) 井上	Destroyed	Tokyo	
50.	1926 Shōwa 1	Tsurumi ツルミ		Karuizawa, Nagano Pref.	
51.	**1926-27 Shōwa 1-2**	**Viscountess Hamao 浜尾 子爵**	**Demolished**	**Tokyo**	**Wood**
52.	**1926-27 Shōwa 1-2**	**H. T. Stapleton H. T. ステイプルトン**		**Yokohama**	**Concrete, wood**
53.	1927 Shōwa 2	Jan Svagr ヤン・ソブァ			
54.	**1927-28 Shōwa 2-3**	**Italian Embassy (ambassador's residence) イタリア大使館 (大使の家)**	**Extant**	**Lake chuzenji, Nikko, Tochigi Prefecture**	**Wood**
55.	1928 Shōwa 3	Czech Embassy (ambassador's residence) チェコ大使館 (大使の家)	Unbuilt project	Tansumachi, Azabu, Tokyo	
56.	1928 Shōwa 3	TANAKA 田中		Yokohama	
57.	**1929 Shōwa 4**	**J. Gadsby L. ガッドスビ**		**Ōmori, Ōta-ku, Tokyo**	**Wood**
58.	1930-1933 Shōwa 5-7	Canadian Embassy (ambassador's residence) カナダ大使館 (大使の家)	Extant	7-3-38 Akasaka, Minato-ku, Tokyo	
59.	**1931 Shōwa 6**	**Shirō Akaboshi 赤星 四郎**	**Moved**	**Fujisawa, Kanagawa Prefecture**	**Wood**
60.	1931 Shōwa 6	Ivan P. Troedsson イバン・P. トロッドソン	Extant	Nikko, Tochigi Prefecture	wood
61.	1931 Shōwa 6	Viscount T. Soma	Unbuilt project	Tokyo	Reinforced concrete
62.	1931 Shōwa 6	Count Kuroki 黒木 伯爵		Abiko, Chiba Pref.	Wood
63.	**1931-32 Shōwa 6-7**	**Imaizumi 今泉**		**Tokyo**	
64.	1931-32 Shōwa 6-7	Shunkichi Nomura 野村 シュンキチ		Tokyo	
65.	**1931-32 Shōwa 6-7**	**Kisuke Akaboshi 赤星 喜助**		**Tanakawa, Minato-ku, Tokyo**	**Reinforced concrete**

66.	**1932 Shōwa 7**	**Tadaichi Okada 岡田 タダー**		**Tamagawa, Saitama Pref.**	**Wood**
67.	1932 Shōwa 7	Viscount T. Doi ドイ 子爵			
68.	1932 Shōwa 7	Nishiwaki 西脇			
69.	**1932-33 Shōwa 7-8**	**Hatoyama Hideo (A house) 鳩山 ヒデオ**		**Koishikawa, Bunkyo-ku, Tokyo**	
70.	**1932-33 Shōwa 7-8**	**Hatoyama Hideo (B house) 鳩山 ヒデオ**		**Koishikawa, Bunkyo-ku, Tokyo**	
71.	**1933 Shōwa 8**	**Antonin and Noémi Raymond (Karuizawa summer house) アントニンとノエミ レーモンド (軽井沢夏の家)**	**moved, now Peynet Museum**	**Karuizawa, Kitasaku-gun, Nagano Prefecture**	**Wood (concrete base)**
72.	1933 Shōwa 8	Ryōzō Asano 浅野 リョウゾウ		Karuizawa, Nagano Pref.	Wood
73.	1933 Shōwa 8	Hajime Kawasaki 川崎 ハジメ		Yugawara, Kanagawa Pref.	
74.	**1933-34 Shōwa 8-9**	**Morinosuke Kawasaki 川崎 守之助**	**Demolished**	**Azabu, Minato-ku, Tokyo**	**Reinforced concrete**
75.	1933-34 Shōwa 8-9	Yūji Kodera 小寺 ユウジ	Demolished in 2007	Karuizawa, Kitasaku-gun, Nagano Prefecture	Wood
76.	**1933-35 Shōwa 8-10**	**Tetsuma Akaboshi 赤星 鉄馬**	**Extant**	**4-26-21 Kichijoji-Honchō, Mushino City, Tokyo**	**Reinforced concrete**
77.	1934 Shōwa 9	Viscount Takenate Sōma 相馬 タケナテ 男爵	Unbuilt project	Tokyo	
78.	1934 Shōwa 9	Daniel Henry Blake ダニエル・ヘンリ・ブレイーク	Destroyed by fire	Hachiyama-chō 6, Shibuya-ku, Tokyo	
79.	**1934 Shōwa 9**	**Rokurō Akaboshi 赤星 六郎**		**Ninomiya, Kanagawa Pref.**	**Wood**
80.	1934 Shōwa 9	Andree アンドレー	Unbuilt project		
81.	1934 Shōwa 9	Sasaki ササキ		Karuizawa, Nagano Pref.	
82.	1934 Shōwa 9	Pearce ピアス		Hayama, Kanagawa Pref.	
83.	1934 Shōwa 9	Fujioka 藤岡			
84.	1934-35 Shōwa 9-10	Florence Ann Walker フロランス・アンヌ・ワオーカー	Demolished	Karuizawa, Nagano prefecture	Wood
85.	**1934-35 Shōwa 9-10**	**Masakazu Oka 岡 マサカズ**	**Extant, altered**	**Karuizawa, Nagano Prefecture**	**Wood**
86.	**1934-36 Shōwa 9-11**	**Kikusaburō Fukui 福井 菊三郎**	**Demolished**	**Atami, Sizuoka Prefecture**	**Reinforced concrete**
87.	1935 Shōwa 10	Andrew アンドルー			
88.	1935 Shōwa 10	Asabuki アサブキ		Tokyo	
89.	1935 Shōwa 10	Yamaji ヤマジ		Atami, Shizuoka Pref.	

90.	1935 Shōwa 10	S. Obara オバラ S.		Tokyo	
91.	1935 Shōwa 10	Toyama トヤマ		Nasu, Tichigi Pref.	
92.	1935 Shōwa 10	S. Obara オバラ S.		Tokyo	
93.	1936 Shōwa 11	General M. Nagaoka 長岡 将軍		Harajuku, Shibuya-ku, Tokyo	
94.	1935-36 Shōwa 10-11	Shiraishi シライシ		Tokyo	
95.	1936 Shōwa 11	English Embassy (ambassador's residence) イギリス大使館 (大使の家)		Tokyo	
96.	**1936-37 Shōwa 11-12**	**A. O. Keller A. O. ケラー**		**Ikegami, Ōta-ku, Tokyo**	**Concrete base and wood**
97.	**1936-37 Shōwa 11-12**	**Masakazu Oka 岡 マサカズ**	**Demolished**	**Setagaya-ku, Tokyo**	**Wood**
98.	1936-37 Shōwa 11-12	Naruse ナルセ		Meguro-ku, Tokyo	
99.	1936 Shōwa 11	Ivan P. Troedsson イバン・P. トロッドソン		Minami Azabu, Minato-ku, Tokyo	Wood
100.	1937 Shōwa 12	Tetsuma Akaboshi Jr. 赤星 鉄馬 (息子)			
101.	1937-38 Shōwa 12-13	Yamada Chisaburō 山田 チサブロウ			
102.	1937-38 Shōwa 12-13	Cochrane コクレイン			

APPENDIX 3
ANTONIN_RAYMOND_DATABASE

FOREWORD

- This database was created using the software File Maker Pro 7. It has been burned onto the attached CD-ROM under a “read-only” status. It can be opened with File Maker Pro 7 or more recent versions.
- The architectural drawings presented in the printed version of the database are of low quality. Please refer to the CD-ROM for high quality images.

- このデータベースは、ソフトウェア File Maker Pro 7 を用いて作成された。添付の読み込み専用の CD-ROM に入っている。File Maker Pro 7 以降りのバージョン開くことができる。
- 出力版のデータベースは図面のが悪い。画質のよいものは CD-ROM を参照いただきたい。

ACKNOWLEDGEMENTS

This database could not have been created without the generosity and genuine interest of several groups and individuals who kindly opened their door and assisted me during my research.

I would like to express my deepest gratitude to Raymond's Architectural Design Office in Tokyo, for giving me free access to their archives and letting me forensically browse through several hundreds of architectural drawings and allowing me to bring duplicates home. I would like to thank more particularly Matano Norisuke 的埜 教介 who provided precious assistance in the locating of the drawings that were relevant to my research and also for dealing with the practical matters of the drawings reproduction.

My sincere gratitude to Kitazawa Koichi 北澤 興一, former staff member of Raymond's Architectural Design Office and present owner of Shinkaruizawa Studio, where I collected the majority of the original photographs included in this database, as well as priceless documents used during the course of my research. Thank you to M. and Ms Kitazawa for their hospitality and kindness during my stay in Karuizawa.

I would like to express my deepest gratitude to Atsuhiko and Reiko Matsuoka 松岡 淳彦, 松岡 玲子, residents of Karuizawa and defenders of its architectural and natural heritage, for their genuine interest and their kindness. I would like to thank them particularly for their hospitality and precious guidance around Raymond's houses in Karuizawa.

Finally, my sincere gratitude to Professor Monnai 門内 輝行 of Kyoto University without who's technical support this database could not have been created.

INTRODUCTION TO THE DATABASE

This database was created with data and material accumulated over a period of 6 years (2002-2007). The database is exclusively related to private residences designed by Antonin Raymond -or under his authority- and built in Japan between 1921 and 1938. These two dates respectively mark the beginnings of Raymond as an independent architect in Japan and his returned to the United States after a trip to India, on the eve of the Second World War's outbreak.

1 Database composition:

1.1 Type of documents:

The information compiled in this database originates from three kinds of sources: primarily, first hand architectural drawings and original photographs that I collected personally during three field work trips made in 2002, 2005 and 2006. The drawings were collected from the archives of Raymond's Architectural Design Office in Tokyo, and the photographs at his former summer studio and house[1] in Karuizawa. Secondly, information was gathered from American and Japanese architectural magazines and finally from books, including Antonin Raymond's autobiography.

1.2 Architectural Drawings:

The architectural drawings collected in Tokyo (fig. 1 and 2) are final stage drawings drafted on A2 size sheets or drafting paper, or in the case of early works designed in the 1920s, on Japanese paper (*washi*). They were drafted in the standard western form of plans, elevation and sections, generally at a scale of 1:100 or 1:50. Plot plans are drawn at the scale of 1:200 and details at the scale of 1:20. Apart from these basic elements, the drawings bare the name of the client as well as a commission and drawing number and also provide information on materials, orientation, and in some cases areas, for which the traditional unit of *tsubo* is used (1 *tsubo* = 30.303 cm). Some drawings are dated and/or bare the name of their draftsman, they might also provide information about the situation of the building within a landscape or garden. The unit used for dimensions in the drawings is the traditional unit *shaku* (1 *shaku* = 3.306 m^2). The language used on the drawings is English, with a few rare exceptions, whether the client was Western or Japanese.

[1] Karuizawa new studio (軽井沢新のスタジョ), 1962. This property is presently owned by Kitazawa Koichi 北澤 興一, former member of staff at Raymond's Architectural Design office.

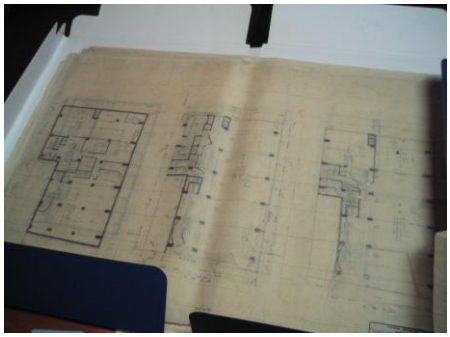


Fig. 1 and 2 Archives at Raymond's Architectural Design Office, Tokyo.

1.3 Original photographs:

The original photographs (fig. 3 and 4) usually show the houses upon completion or shortly after completion. There are also photographs taken on the building site during construction in the case of the Fukui house (1924) and the Kawasaki house (1934). The "photos" table in some cases displays contemporary photographs taken during my field work trips or extracted from publications. The photographs naturally reveal space in its three dimensions but also provide valuable information on interior design, furniture, materials and textiles used in the houses, which were for the majority also designed by Antonin Raymond and his wife Noémi.

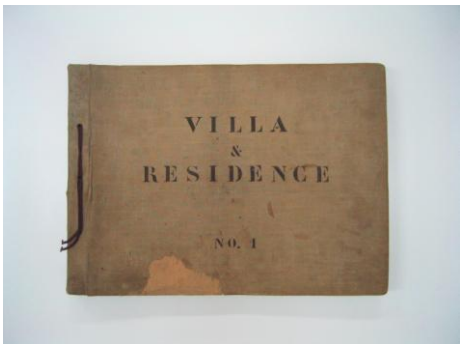


Fig. 3 and 4 Original photographic albums from "Karuizawa new studio".

1.4 Complementary sources

In the case where original plans and photographs were not available first hand, the documents have been extracted from material published at the time of the houses' construction. Architectural magazines surveyed for the purpose of my research were : *Jūtaku* 住宅, *Kokusai Kenchiku* 國際建築, *Kenchiku* 建築, *Shinkenchiku* 新建築 and *Kenchiku Bunka* 建築文化. Other publications used in the making of this database include numerous books in Japanese and English, special issues, PhD dissertations and Antonin Raymond's own autobiography (see thesis bibliography for reference).

INSTRUCTIONS ON THE USE OF THE
ANTONIN_RAYMOND_DATABASE CD ROM

This section provides a presentation of the database and simple instructions on how to use the Antonin_Raymond_database CD ROM. The printed version of the database provides the same amount of information as the CD ROM version. The CD ROM enables simple browsing but also provides the possibility to make a quick and selective search through the use of the “Find” mode.

1. Overall composition of the database

The Antonin Raymond database contains 3 **Tables** : “Houses”, “Photos” and “Drawings” (Fig. 1):

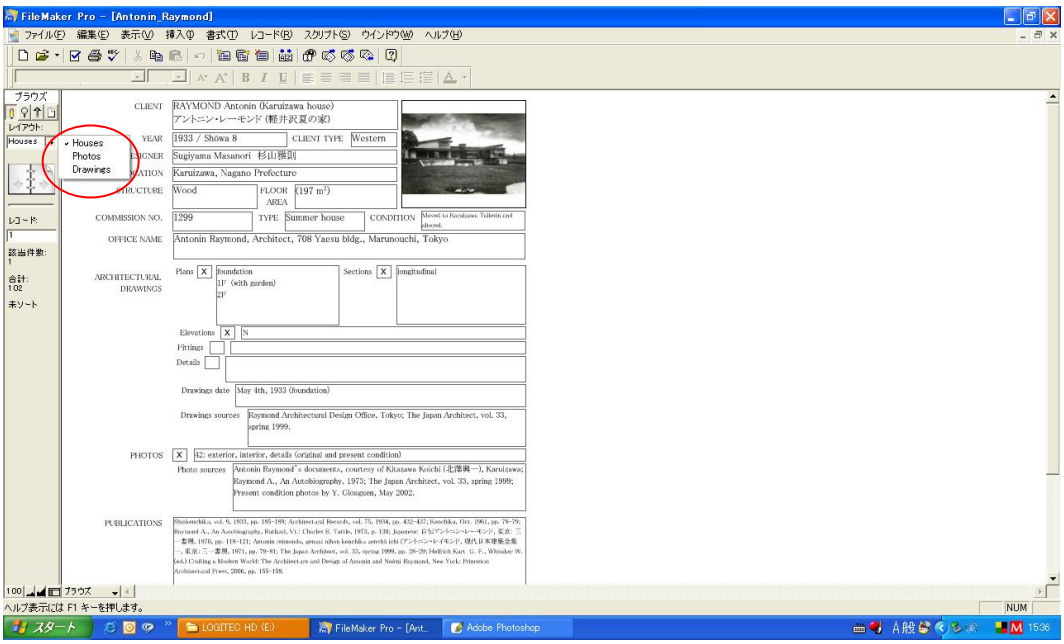


Fig. 1 Tables

Each “Table” contains a number of “**Records**”. Each “Record” contains information about one house for which data has been found.

The total number of houses registered in the database appears in the “Houses” table, which shows a total number of “Records” of 102 (Fig. 2). The amount of information contained in each Record can vary, according the material that I was able to find regarding each particular house. Some records contain a lot of information while others contain very little.

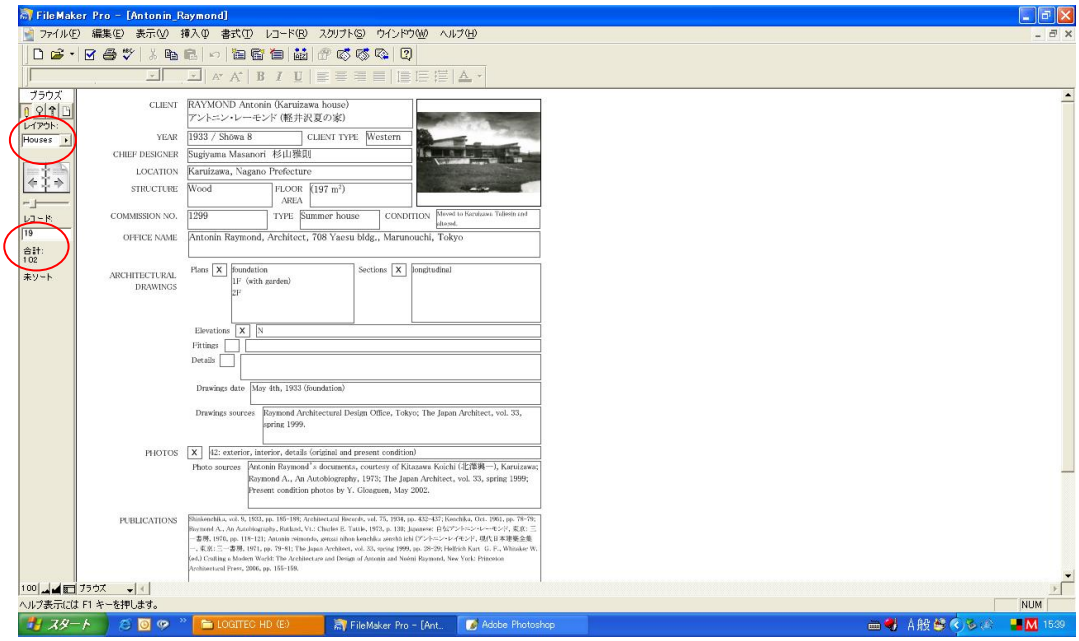


Fig. 2 Total number of records in a table

2. “Browse” mode and “Find” mode

The “Records” contained in each “Table” can be used in two different “modes”. The “Browse” mode (Fig. 3) and the “Find” mode (Fig. 4).

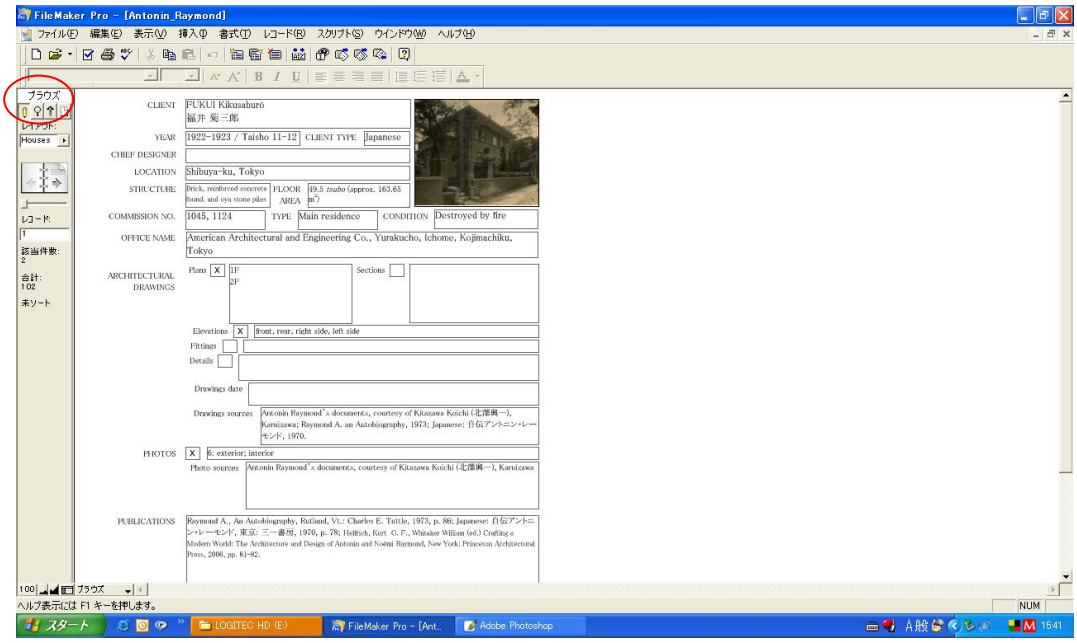


Fig. 3 “Browse” mode

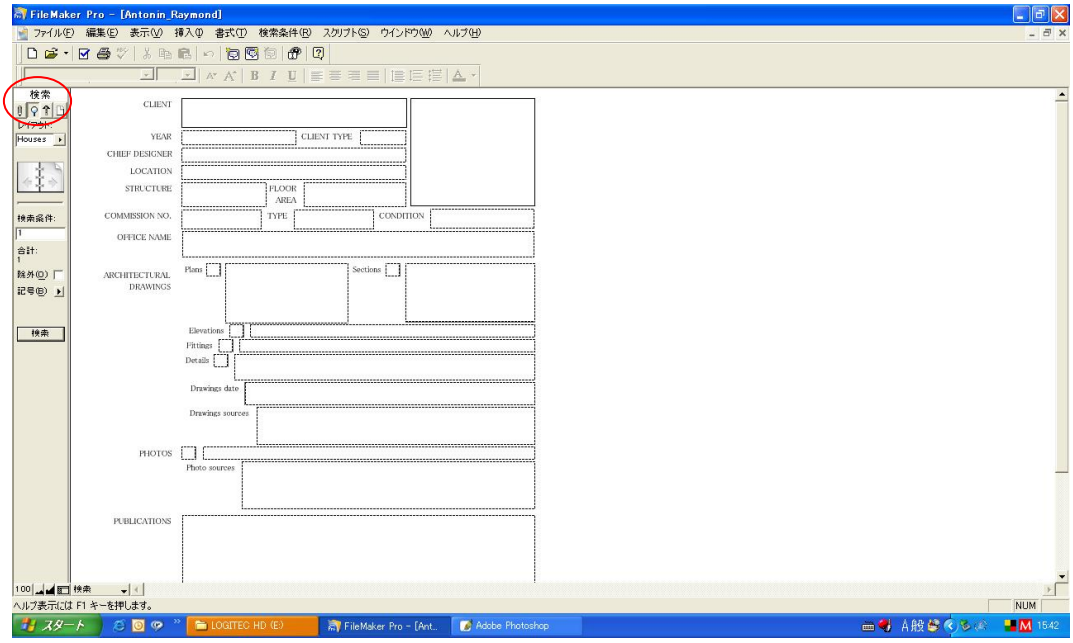


Fig. 4 "Find" mode

- The "Browse" mode shows all the information contained in one "Record".
- The "Find" mode is used to search for particular information. It is a blank sheet containing all the "fields" (or boxes) that identify each "table". This means that the "Browse" mode can be used to search for "Houses", "Photos" and/or "Drawings". By typing information in any of the "fields" in "Find" mode, one is able to make a selective search.

  For example, in order to find the houses that were designed for Antonin Raymond himself in the database, first click on the small magnifying glass icon in the tool bar to switch to "Find" mode. Then write "Raymond" in the "CLIENT" field and click the "Find" button (Fig. 5). The result shows that there are 3 houses in the database for which the client was Antonin Raymond (Fig. 6). The result of each search is always given in "Browse" mode, so it is possible to browse through these results. In order to start a new search, click on the "Find" mode icon again.

  Multiple criteria search is also possible by entering information in several fields at a time:

  *The information typed in the field in "Find" mode does not have to be complete. One word or only a part of a word will provide some results if such a word is present in the database in that particular field.

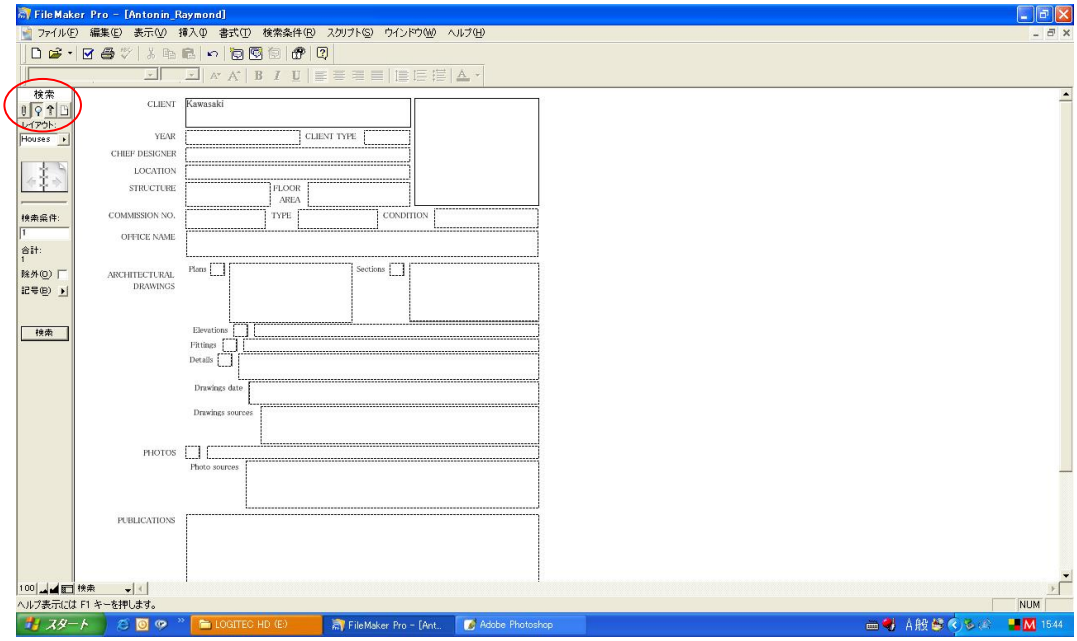


Fig. 5 “Find”mode

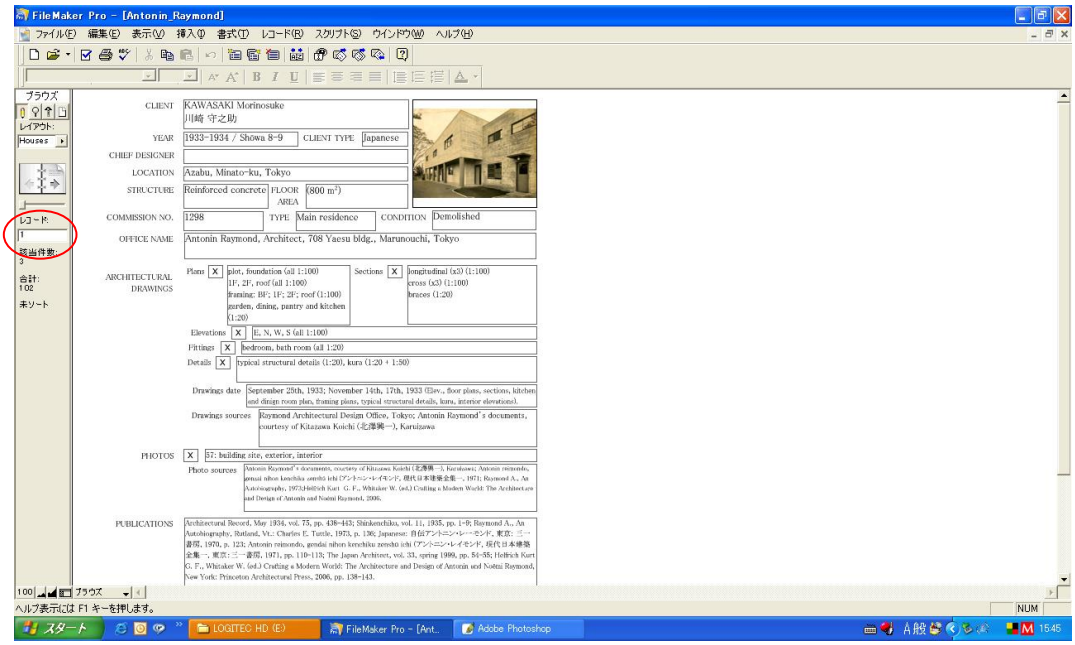


Fig. 6 Found information

3. Tables:

The following figures (7 and 8) show the "**Record**" of **Karuizawa house**, in the "Houses" table and "Photos" tables, in "Browse" mode.

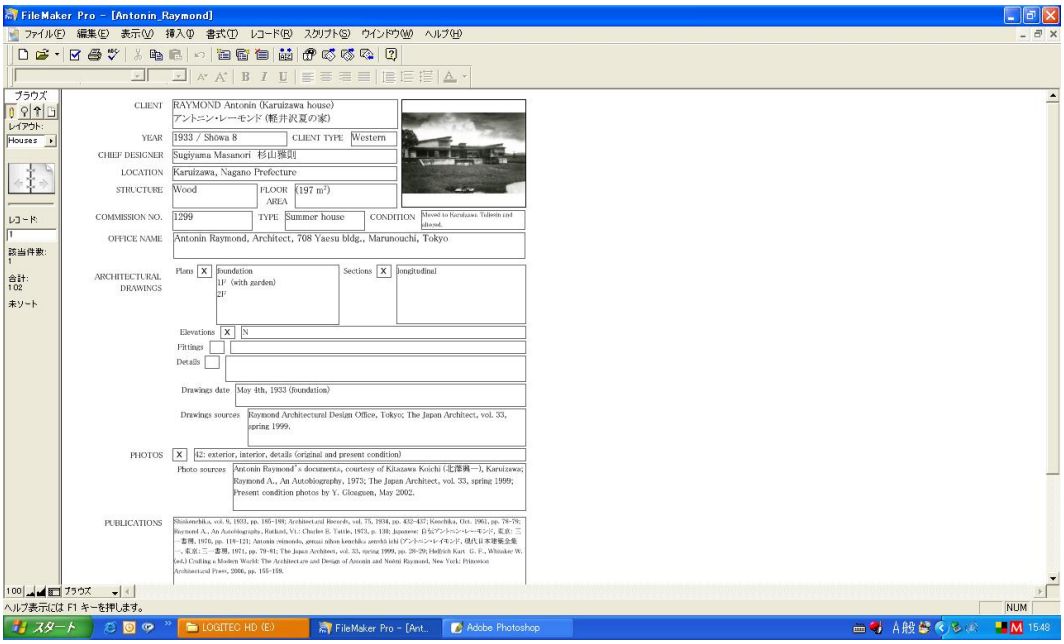


Fig. 7 The "Houses" table in "Browse" mode

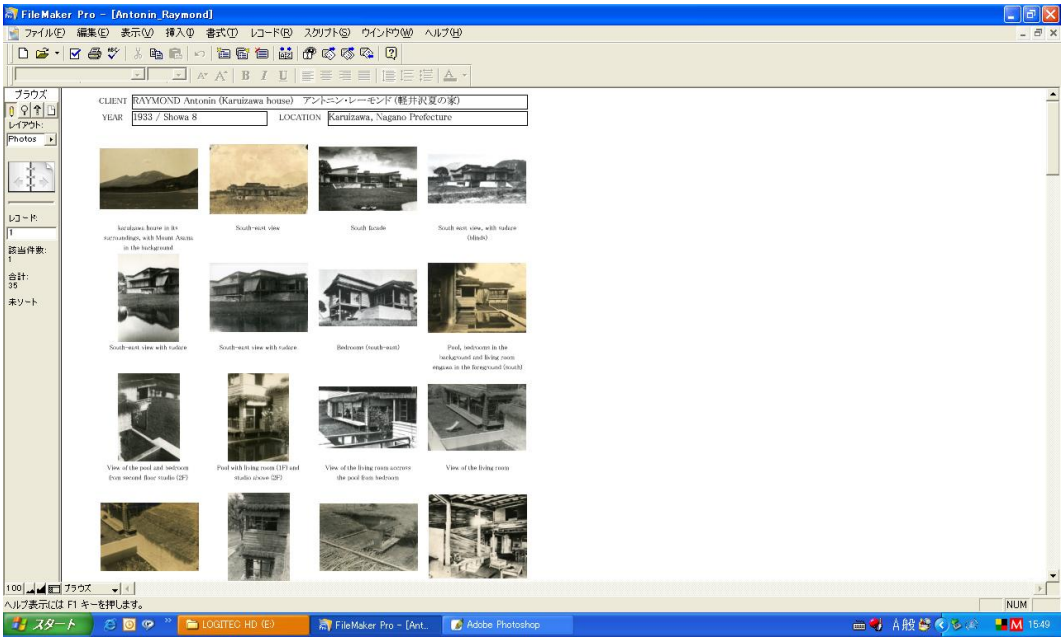


Fig. 8 The "Photos" table in "Browse" mode

The “Photos” table contains a reminder of the client’s name, the location of the house and the dates of the beginning and completion of the project. Each photograph has a descriptive title.

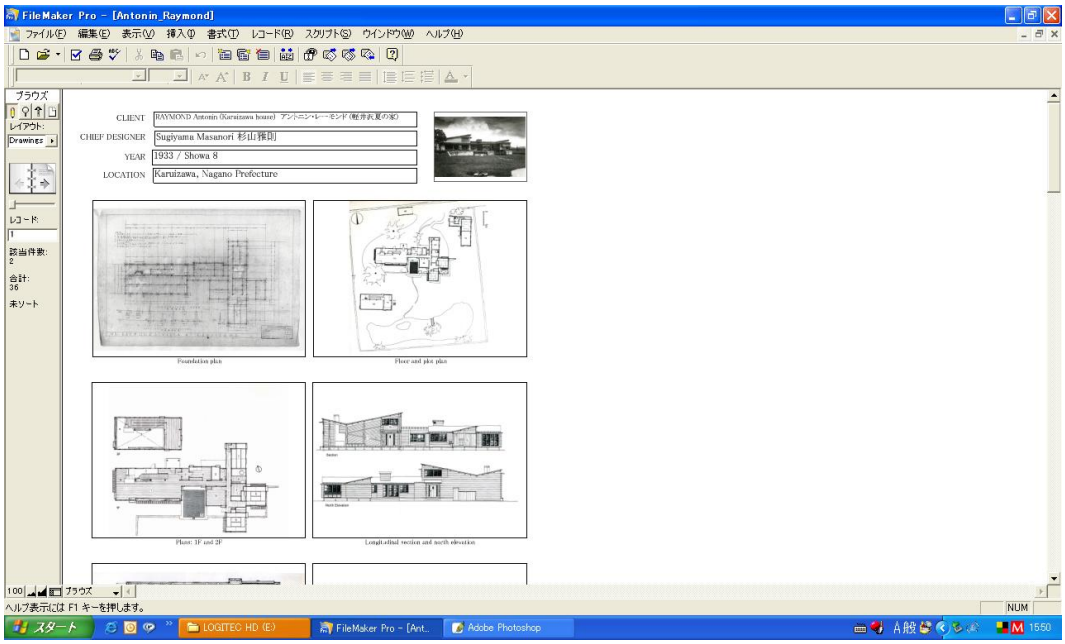


Fig. 9 The “Drawings” table in “Browse” mode

This “Drawings” table also contains a reminder of the client’s name, the location of the house and the dates of the beginning and completion of the project. Each drawing has a title and scale, when determined.

4. Information contained in the “Houses” table (Fig. 10):

The “Houses” table is the main “table” of the database. It is where all the information available in this database for each house is gathered, it acts as an ID card of the house and is organised in three sections, which contain various “fields”.

- Section 1 compiles general information regarding the house, and provides details connected to Raymond’s Architectural Design Office in regards to the particular project.
- Section 2 presents a complete overview of all the data available on the house in the database. A cross in the small box (or “field”) next to “Plans”, “Section”, “Elevations”, “Fittings”, “Details” and “Photos” means that these kinds of documents are available. In the larger “Fields” next to them is the detailed list of the documents available from the “Photos” and “Drawings” tables of the database.

- Section 3 gives a number of publications in which the house was published or appears and in some cases the “Notes” field provides extra information about the client or the history of the house.

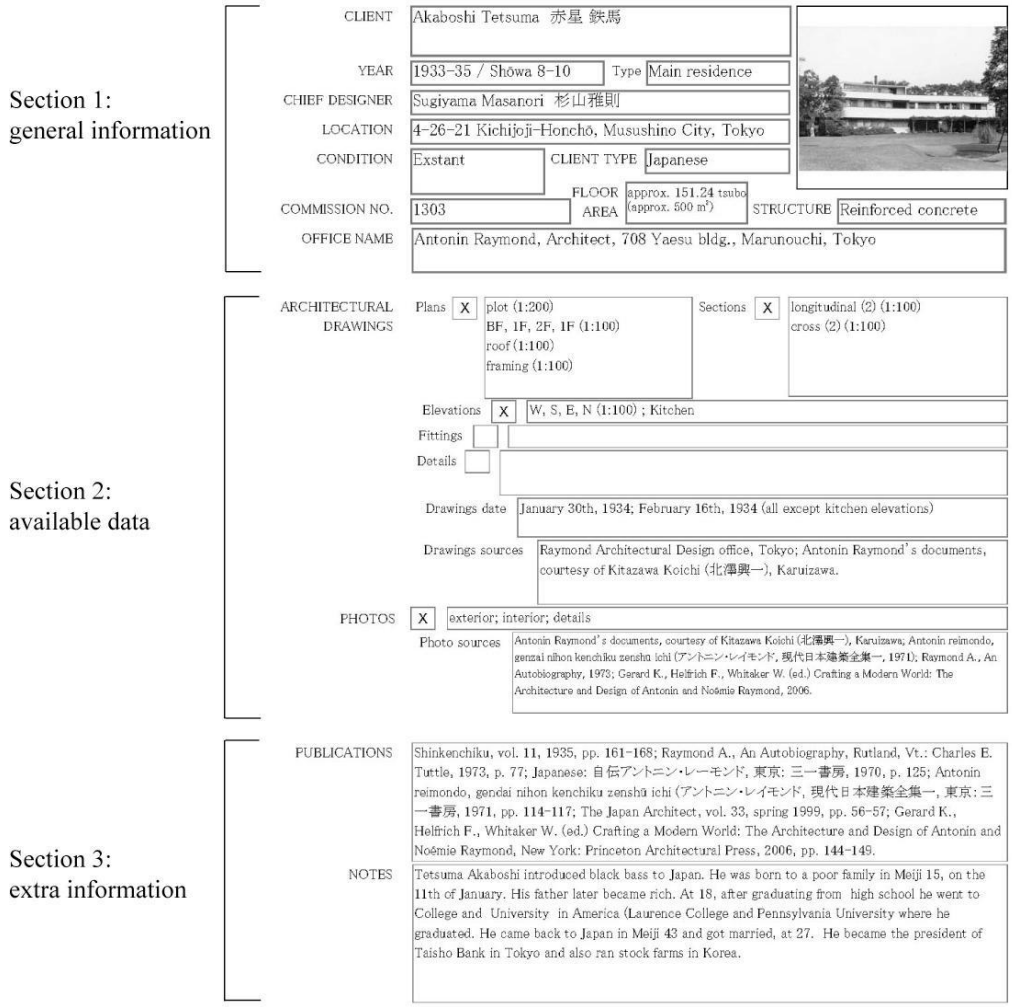


Fig. 10 “House” table

5. Sections and their fields:

- Section 1:

CLIENT: contains the name and title of the client. The family name appears first and in capital letters. This way, “Records” can be sorted by alphabetical order if and when necessary.

YEAR: contains the year of the beginning and completion of the project, in both Western and Japanese dating system.
CLIENT TYPE: There are two "Types" of clients defined in this database, that is, "Japanese" and "Western" clients. This field would be useful to anyone who wishes make a selective search in the case of a comparative study between houses designed for Western clients and houses designed for Japanese clients.
DESIGNER/DRAFTMAN: this field contains the names of the designer in charge of the projects and/or that of the draftsman who's name appear on the architectural drawings.
LOCATION: contains the location and the address of the house when available.
STRUCTURE: This field refers to the materials used for the structure of the house.
FLOOR AREA: This field shows the total flooring area of the house. In some cases this area was unknown and has been calculated from the drawings collected at Raymond's Architectural Design office or other documents. In this case the total area is given "approximately".
TYPE: this field refers to the type of the house shown in each "Record". Seven types have been defined in this database: "Main residence", "Summer house", "Country villa", "Missionary house", "Company house", "College house" and "Concept house".
CONDITION: this field refers to the present condition of the house.
OFFICE NAME: contains the name of Raymond's office at the time of the project.

- Section 2:

ARCHITECTURAL DRAWINGS: each field contains a detailed list of all the drawings available in the database, with their scale. Most of the drawings included in this database have been obtained from Raymond's Architectural Design office in Tokyo. In some cases however, drawings which were not available at the Office have been extracted from other sources such as books and architectural magazines. References to these sources are given in the "Houses" table.
PHOTOS: this field contains the total number of photos available for the house and a reference to their type. Please refer to the "Photos" table for a detailed overview of the photos.
*In order to make a selective search of the houses for which there are drawings and/or photos available in the database using the "Find" mode, enter a "X" in the small field (or box) next to the desired type of drawings of next to "PHOTOS" and click the Find button.

- Section 3:

PUBLICATIONS: For each “Record”, this field provides reference to the main sources of information available in Japan regarding each house. The list of publications does not claim to be exhaustive, but it compiles most of the reliable sources available from libraries.

NOTES: This field contains any odd information I have been able to gather regarding the house or its clients. It is not the main focus of the database and therefore should be considered as extra information.

6. The “sort” function / ソート

The “sort” function is useful to organize or classify the records in a certain order according to the purpose of the research. To access the “sort” function, go to the menu, and click on “sort records”. A window opens: on the left appears a list of all the fields included in the record. Click on the field that you wish to sort the records by. For example: if I wish to sort the records by chronological order, I will click on the “date” field. Once the field is selected, click on “sort record”.

TWENTY HOUSES SELECTED FROM THE
ANTONIN_RAYMOND_DATABASE

CLIENT/HOUSE: TANAKA Heihachi
田中 平八

YEAR: 1921 / Taisho 10

CLIENT TYPE: Japanese

DESIGNER/DRAFTSMAN: Antonin Raymond

COMMISSION No.: 1001, 1007, 1263

LOCATION: Minato-ku, Tokyo

TYPE: Main residence

STRUCTURE: Wood frame & stucco

FLOOR AREA: approx. 100 *tsubo* (approx. 330.6 m^2)

CONDITION: Destroyed by fire

OFFICE NAME: American Architectural and Engineering Co., Yurakucho, Ichome, Kojimachi-ku, Tokyo

ARCHITECTURAL DRAWINGS

Plans [X]: foundation (1:50); 1F (1:50); 2F (1:50); roof (1:50)

Sections [ ]:

Elevations [X]: SW, NW, SW, S, SE (all 1:50)

Fittings [ ]:

Details [ ]:

Drawings date: February 16th, 1921 (all except bird's eye view perspective drawing)

Drawings sources: Raymond Architectural Design Office, Tokyo; Antonin Raymond's documents, courtesy of Kitazawa Koichi (北澤興一), Karuizawa; Raymond A. an Autobiography, 1973; Japanese: 自伝アントニン･レーモンド, 1970.

PHOTOS [X]: 5: exterior

Photo sources: Antonin Raymond's documents, courtesy of Kitazawa Koichi (北澤興一), Karuizawa; Raymond A., An Autobiography, 1973.

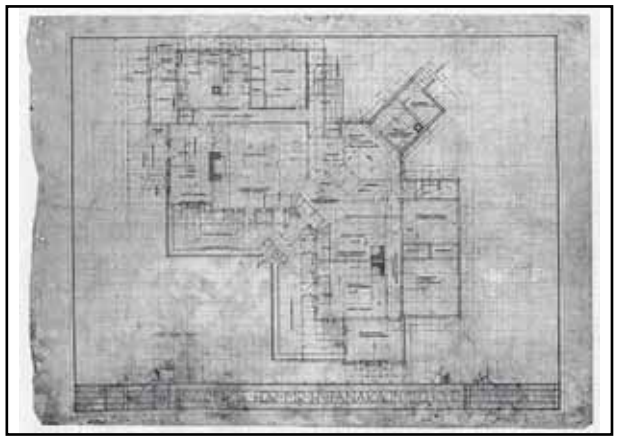
PUBLICATIONS

Raymond A., An Autobiography, Rutland, Vt.: Charles E. Tuttle, 1973, p. 80; Japanese: 自伝アントニン･レーモンド, 東京: 三一書房, 1970, p. 73 ; Helfrich Kurt G. F., Whitaker William (ed.) Crafting a Modern World: The Architecture and Design of Antonin and Noémi Raymond, New York: Princeton Architectural Press, 2006, p. 83.

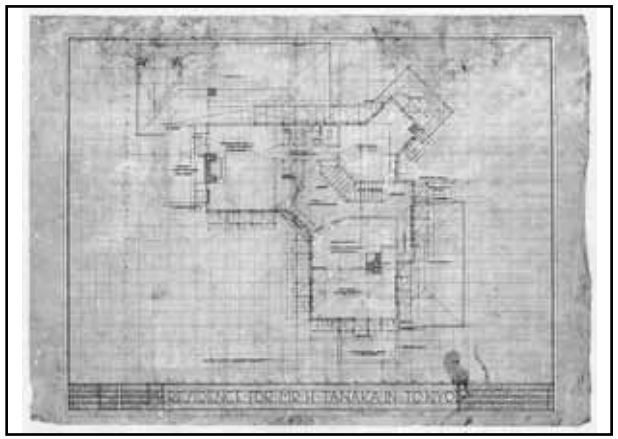
NOTES

Heihachi Tanaka a member of the Tokyo CLub at the same time as Antonin Raymond commissioned this house, but it was occupied by his son-in-law, TanakavJirō, who was the of managing director of Nippon Petroleum Company.
On the drawings we can see that the house stood next to anoter house, built in the traditional Japanese style.

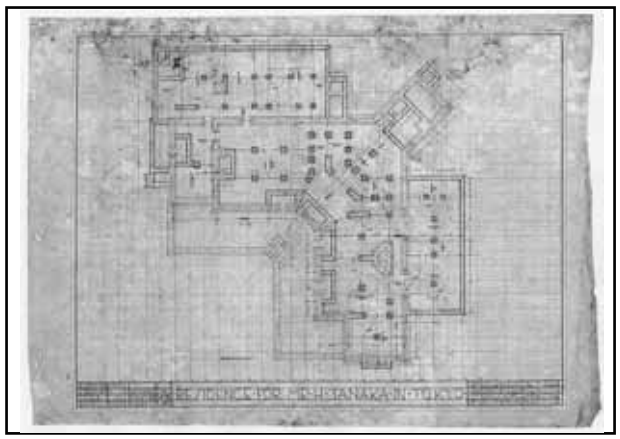
source: HELFRICH Kurt G. F.: Building the contemporary house: modernity, regionalism and the ideal of Japan in Antonin Raymond's residential architecture, University of Virginia, 1997.



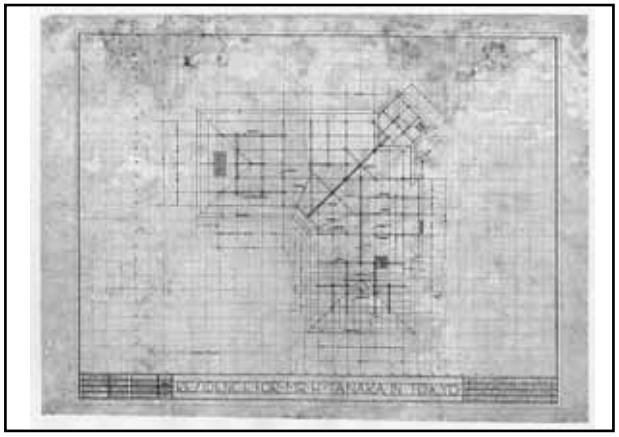
1F plan (1:50)



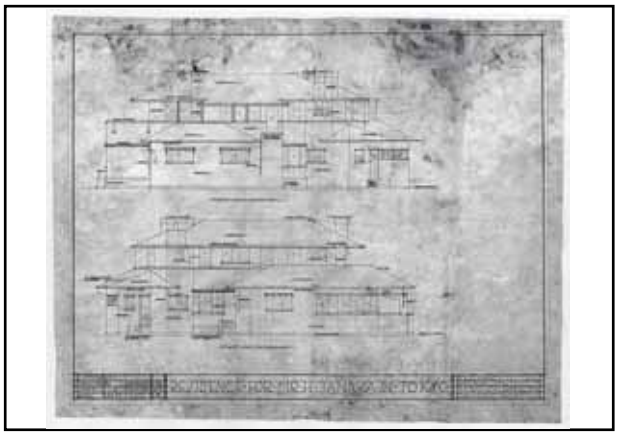
2F plan (1:50)



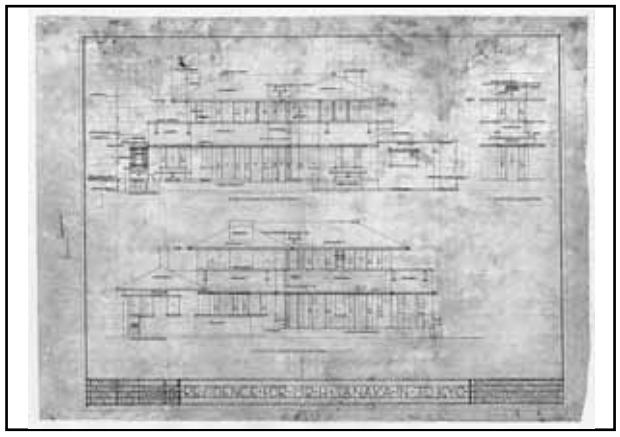
Foundation plan (1:50)



Roof plan (1:50)



Elevations: south-west, south, south-east (1:50)



Elevations: north-east, north-west (1:50)

Bird's-eye perspective drawing

Close-up view of main entrance (south)

Stairs to service entrance (south-east)

View of first and second floor (south east, 1F: owner's study and boudoir, 2F: guest room and sun room)

Second floor blacony (north east)

Main facade (south)

CLIENT/HOUSE: GOTŌ Baron Shinpei
後藤 新平男爵

YEAR: 1921-1924 / Taisho 10-13

CLIENT TYPE: Japanese

DESIGNER/DRAFTSMAN: Antonin Raymond

COMMISSION No.: 1039

LOCATION: Moto-Azabu, Minato-ku, Tokyo

TYPE: Main residence

STRUCTURE: Reinforced concrete

FLOOR AREA: approx. 117.8 *tsubo* (approx. 389.45 m2)

CONDITION: Destroyed by fire

OFFICE NAME: American Architectural and Engineering Co., Yurakucho, Ichome, Kojimachiku, Tokyo

ARCHITECTURAL DRAWINGS

Plans [X]: 1F (1:50); 2F (1:50)

Sections [X]: longitudinal (x2) (1:50); cross (x2) (1:50)

Elevations [X]: N, S, E, W (all 1:50)

Fittings [ ]:

Details [ ]:

Drawings date:

Drawings sources: Antonin Raymond's documents, courtesy of Kitazawa Koichi (北澤興一), Karuizawa Raymond A. an Autobiography, 1973; Japanese: 自伝アントニン・レーモンド, 1970.

PHOTOS [X]: 27: interior; exterior; details; model; building site

Photo sources: Antonin Raymond's documents, courtesy of Kitazawa Koichi (北澤興一), Karuizawa; Raymond A., An Autobiography, 1973.

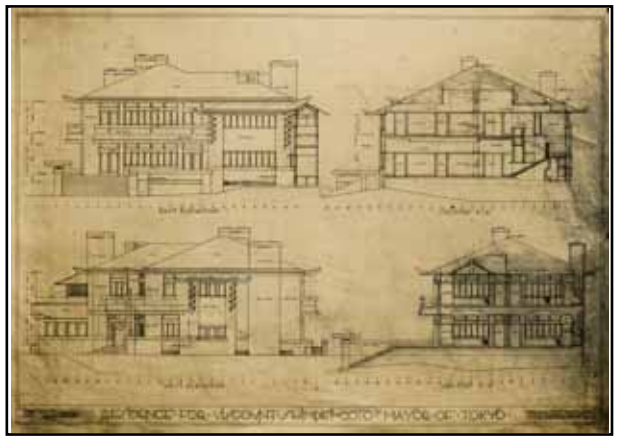
PUBLICATIONS

Raymond A., An Autobiography, Rutland, Vt.: Charles E. Tuttle, 1973, p. 84; Japanese: 自伝アントニン・レーモンド, 東京: 三一書房, 1970, p. 76; Helfrich Kurt G. F., Whitaker William (ed.) Crafting a Modern World: The Architecture and Design of Antonin and Noémi Raymond, New York: Princeton Architectural Press, 2006, p. 83.

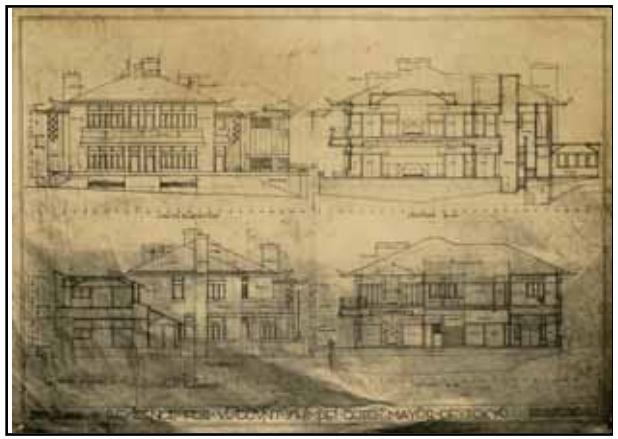
NOTES

Baron Shinpei Gotō (1857-1929), also a member of the prestigious Tokyo Club, was a progressive politician who had been trained as a medical doctor and was mayor of Tokyo when he met Raymond. He advocated plans for urban redevelopment along contemporary American lines which were approved by his close friend, the American political scientist and urban reformer, Charles Austin Beard. Raymond was introduced To Baron Gotō by the parmaceutical entrepreneur Hoshi Hajime (1873-1952) for whom he designed his first major reinforced structure in Tokyo. Frank Lloyd Wright had also designed a house for Shinpei Gotō, but this project wasn't carried out. The Gotō house is the first reinforced concrete house designed by A. Raymond

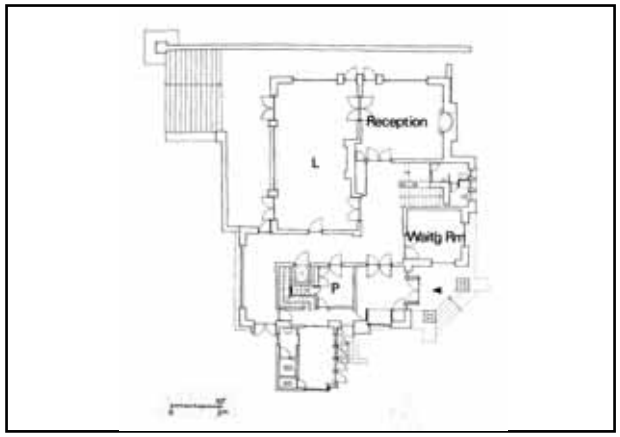
source: HELFRICH Kurt G. F.: Building the contemporary house: modernity, regionalism and the ideal of Japan in Antonin Raymond's residential architecture, University of Virginia, 1997.



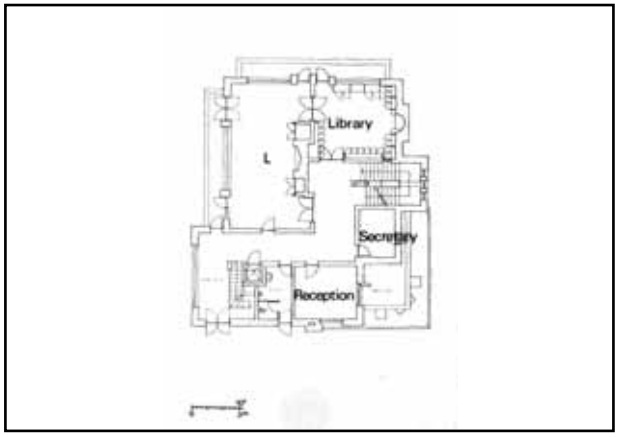
Facades: east, west and sections (1:50)



Facades: north, south and sections (1:50)



1Fplan



2F plan

Plaster model (south-east view)

Plaster model (north-west view)

Plaster model (south view)

Plaster model (west)

Corner main entrance (north-west)

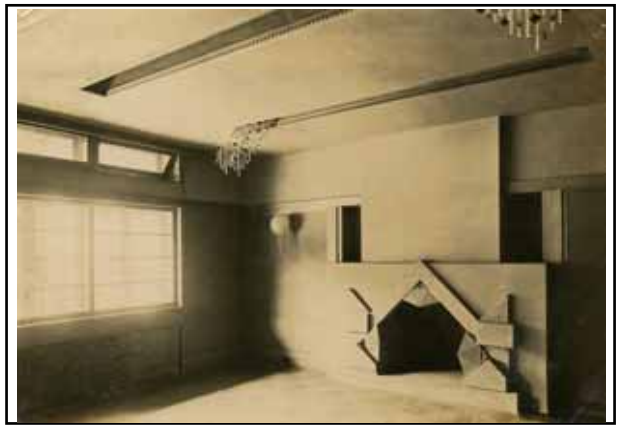
Corner main entrance (north-west)

Close-up of rear stairs leading to terrace (south-east)

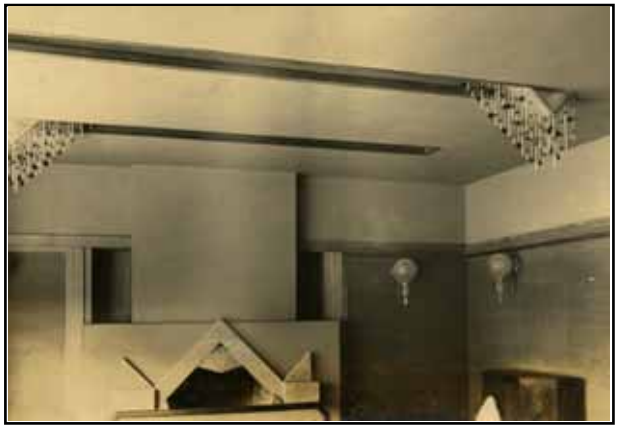
Terrace parapet (south)

Living room fireplace (1F)

Living room ceiling (1F)



Reception room (1F)



Reception room ceiling (1F)

Reception room fireplace detail (1F)

chandellier

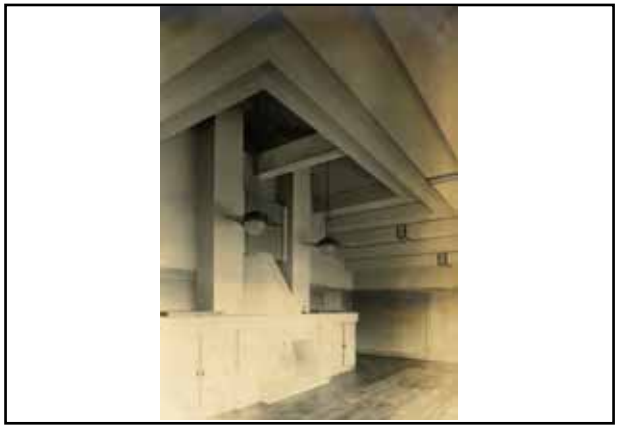
Room corner with light fixture

Library fireplace (2F)

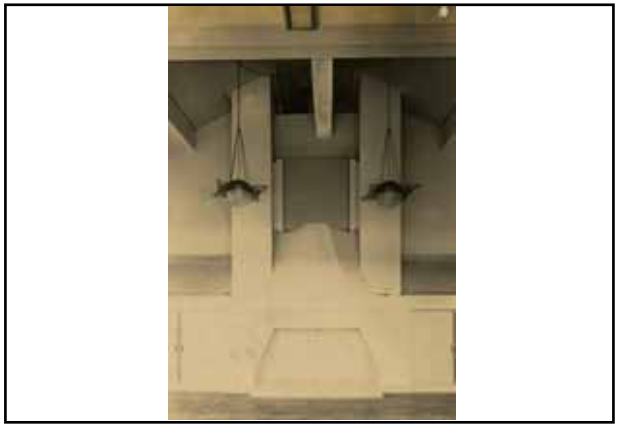
Staircase and landing (2F)

Living room (2F)

Living room ceiling (2F)



Living room fireplace and ceiling (2F)



Livin room fireplace (2F)

Master bedroom (?)

Bathroom

Bathroom

Boiler room

CLIENT/HOUSE: FUKUI Kikusaburō
福井 菊三郎

YEAR: 1922-1923 / Taisho 11-12

CLIENT TYPE: Japanese

DESIGNER/DRAFTSMAN:

COMMISSION No.: 1045, 1124

LOCATION: Shibuya-ku, Tokyo

TYPE: Main residence

STRUCTURE: Brick, reinforced concrete found. and oya stone piles

FLOOR AREA: 49.5 *tsubo* (approx. 163.65 m^2)

CONDITION: Destroyed by fire

OFFICE NAME: American Architectural and Engineering Co., Yurakucho, Ichome, Kojimachiku, Tokyo

ARCHITECTURAL DRAWINGS

Plans [X]: 1F, 2F

Sections [ ]:

Elevations [X]: front, rear, right side, left side

Fittings [ ]:

Details [ ]:

Drawings date:

Drawings sources: Antonin Raymond's documents, courtesy of Kitazawa Koichi (北澤興一), Karuizawa; Raymond A. an Autobiography, 1973; Japanese: 自伝アントニン・レーモンド, 1970.

PHOTOS [X]: 6: exterior; interior

Photo sources: Antonin Raymond's documents, courtesy of Kitazawa Koichi (北澤興一), Karuizawa

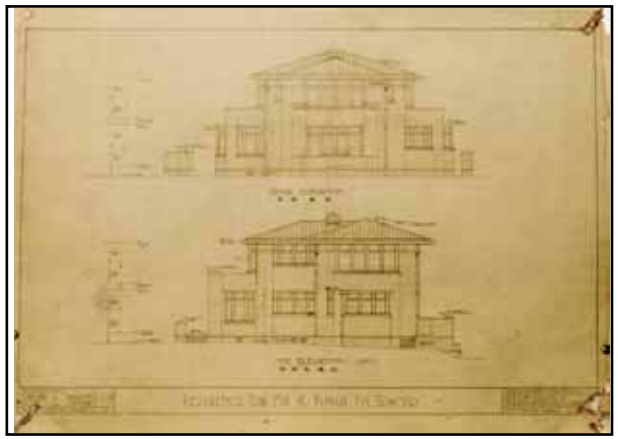
PUBLICATIONS

Raymond A., An Autobiography, Rutland, Vt.: Charles E. Tuttle, 1973, p. 86; Japanese: 自伝アントニン・レーモンド, 東京: 三一書房, 1970, p. 78;
Helfrich, Kurt G. F., Whitaker William (ed.) Crafting a Modern World: The Architecture and Design of Antonin and Noémi Raymond, New York: Princeton Architectural Press, 2006, pp. 81-82.

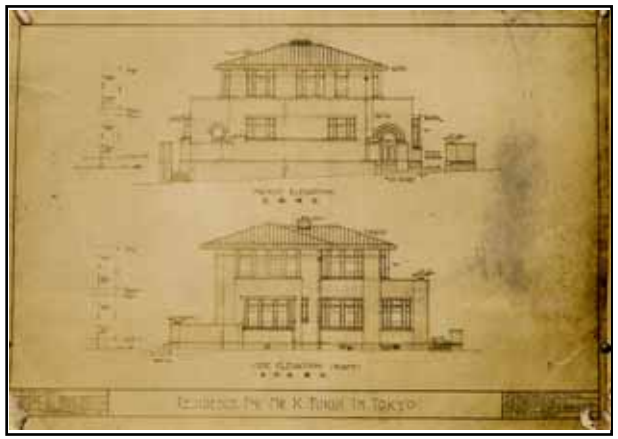
NOTES

Kikusaburo Fukui had been a businessman in New York and member of the Japanese delegation of the Versailles Peace Conference. He was managing director of Mitsui Trading Company in Tokyo when he met Raymond.

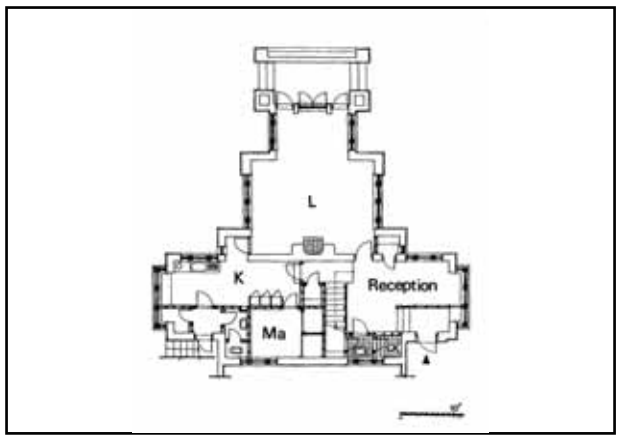
source: HELFRICH Kurt G. F.: Building the contemporary house: modernity, regionalism and the ideal of Japan in Antonin Raymond's residential architecture, University of Virginia, 1997.



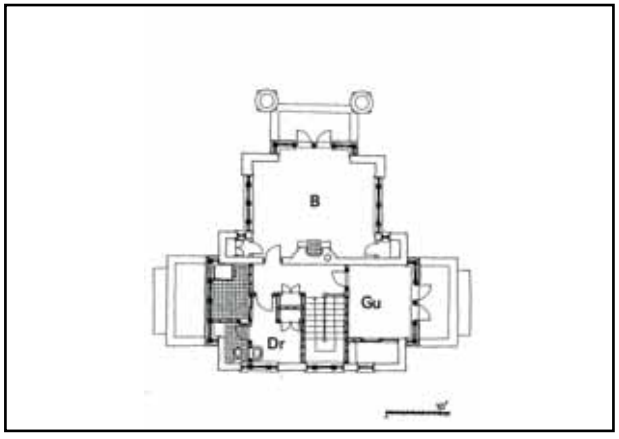
Elevations: rear and left side (1:50)



Elevations: front and right side (1:50)

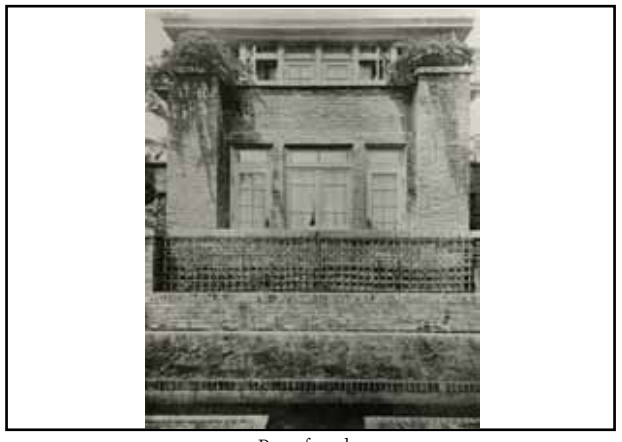


1F plan



2F plan

Street facade (front)



Rear facade

View of reception room with entrance door opening onto exterior

Living room (1F)

Living room (1F)

Bedroom (2F)

CLIENT/HOUSE: RAYMOND Antonin (Reinanzaka house)
アントニン･レーモンド (霊南坂邸)

YEAR: 1924-1926 / T. 13- S. 1
CLIENT TYPE: Western

DESIGNER/DRAFTSMAN: Rintaro Nakagawa 中川軌太郎; Eng. B. Feurstein
COMMISSION No.: 1137, 1255

LOCATION: Akasaka, Minato-ku, Tokyo
TYPE: Main residence

STRUCTURE: Reinforced concrete
FLOOR AREA: 180 m^2 (54.45 *tsubo*)
CONDITION: Demolished (1994)

OFFICE NAME: American Architectural and Engineering Co., 21 Mitsubishi bldg., Marunouchi,Tokyo

ARCHITECTURAL DRAWINGS

Plans [X]: foundation (1:50); kitchen (1:50)

Sections [X]: living room (x2) (1:50); living room-garden (1:50); living room-kitchen (1:50); living room-studio (1:50)

Elevations [X]: E, S, N, W (all 1:50)

Fittings [X]: kitchen and pantry (1:50), windows (1:20)

Details [X]: staircase construction; chimney and column; steel bars arrangement; first floor bars; typical frame in living room; details of area and sky light

Drawings date: May 4th (1933) (foundation plan)

Drawings sources: Raymond Architectural Design Office, Tokyo; Antonin Raymond's documents, courtesy of Kitazawa Koichi (北澤興一), Karuizawa;

PHOTOS [X]: 37: exterior; interior; details; model; plans; sections;

Photo sources: Antonin Raymond's documents, courtesy of Kitazawa Koichi (北澤興一), Karuizawa; Raymond A., An Autobiography, 1973; Field trip photographies, Y. Gloaguen, July 2005; Helfrich Kurt G. F., Whitaker William (ed.) Crafting a Modern World: The Architecture and Design of Antonin and Noémi Raymond, 2006.

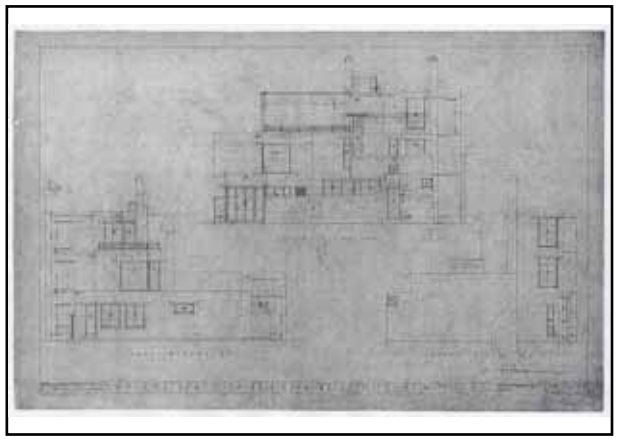
PUBLICATIONS

L'Architecture Vivante 9, Autumn 1925, pp.36; Kenchiku, Oct. 1961, pp.74-75; Raymond A., An Autobiography, Rutland, Vt.: Charles E. Tuttle, 1973, pp. 105-107; Japanese: 自伝アントニン･レーモンド, 東京: 三一書房, 1970, pp. 95-97; Antonin reimondo, genzai nihon kenchiku zenshū ichi (アントニン･レイモンド, 現代日本建築全集一, 東京:三一書房, 1971, pp. 94-99;The Japan Architect, 33, Spring 1999, pp. 24-28; Helfrich Kurt G. F., Whitaker William (ed.) Crafting a Modern World: The Architecture and Design of Antonin and Noémi Raymond, New York: Princeton Architectural Press, 2006, pp. 97-103.

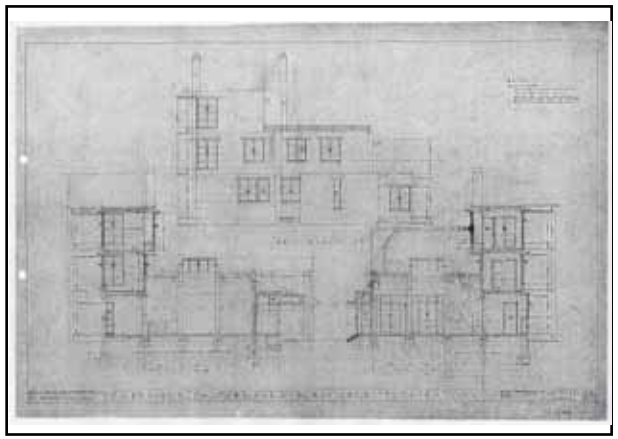
NOTES

Reinanzaka house was the Raymonds' second house in Tokyo. It was the first raw concrete finish house designed by Antonin Raymond and one of the first of its kind in the world. The land was brought off Dct. Rachel Read (search for "Read" house) and was situated accross form Prince Ito's estate. It later became the site of the american embassy.

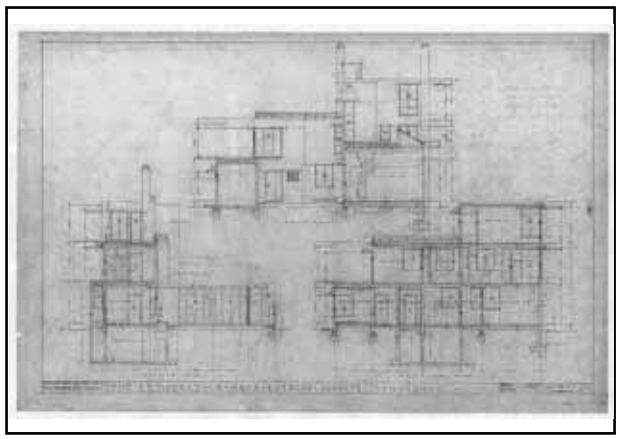
source: HELFRICH Kurt G. F.: Building the contemporary house: modernity, regionalism and the ideal of Japan in Antonin Raymond's residential architecture, University of Virginia, 1997.



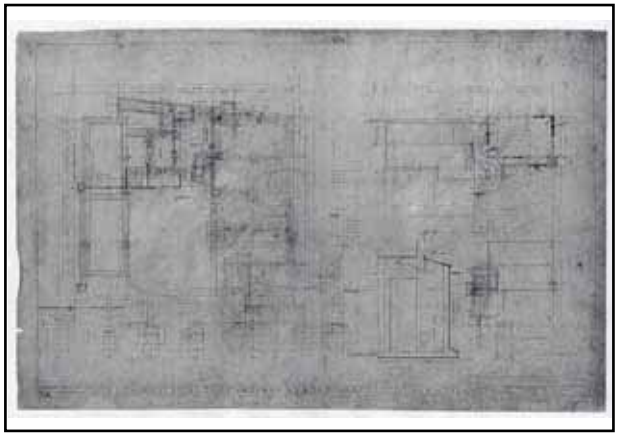
Elevations: south, east, north (1:50)



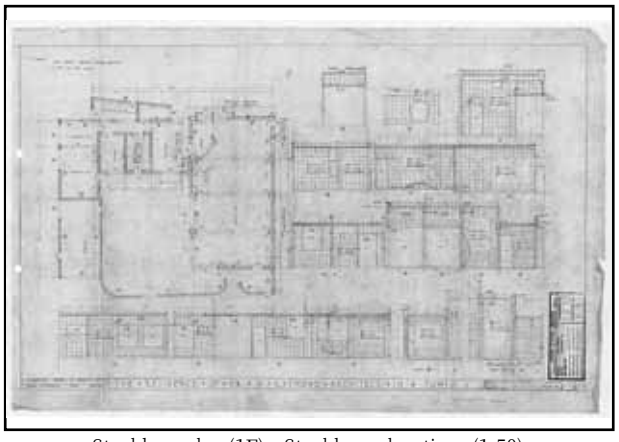
Elevation: west; Sections: longitudinal (1:50)



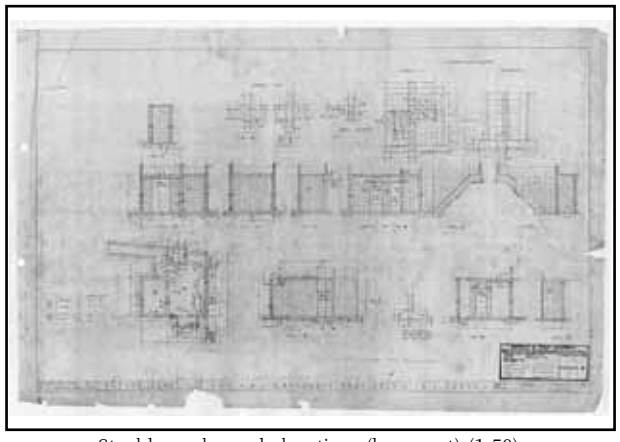
Sections: longitudinal, cross (1:50)



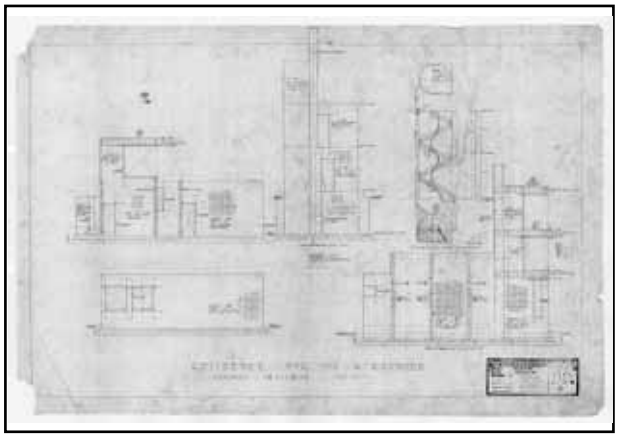
Plans: basement, 3F and roof plan (1:50); section (1:20)



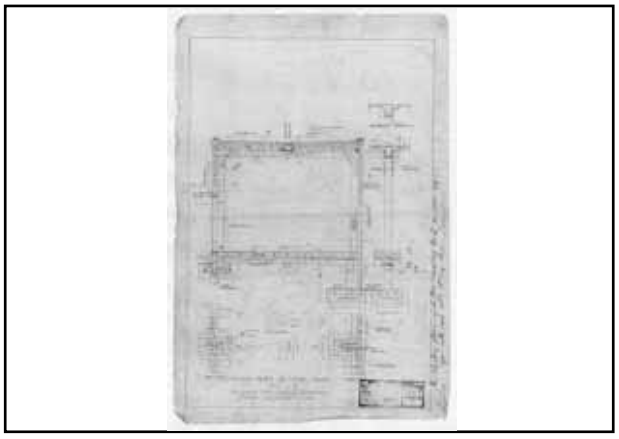
Steel bars plan (1F); Steel bars elevations (1:50)



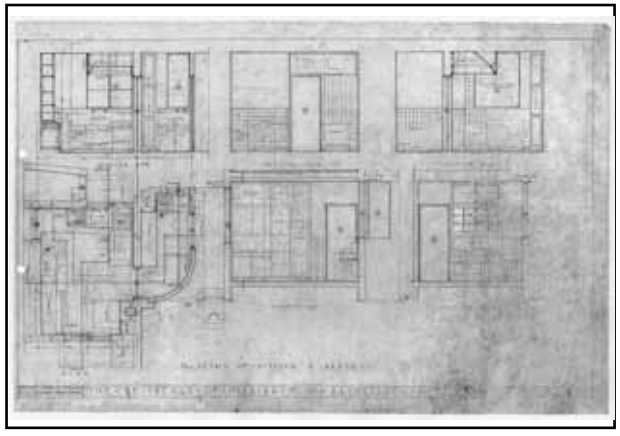
Steel bars plan and elevations (basement) (1:50)



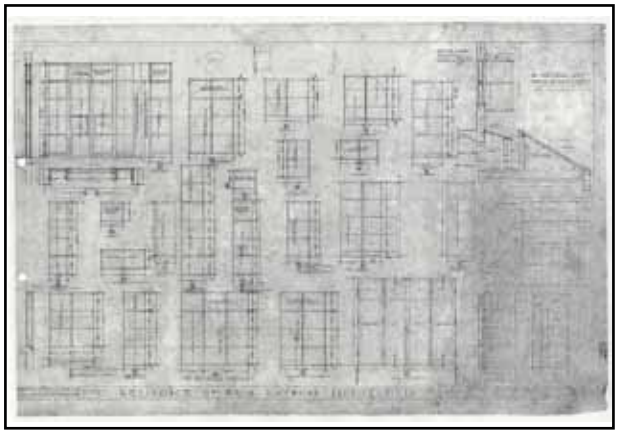
Steel bars for chimney and staircase (1:50)



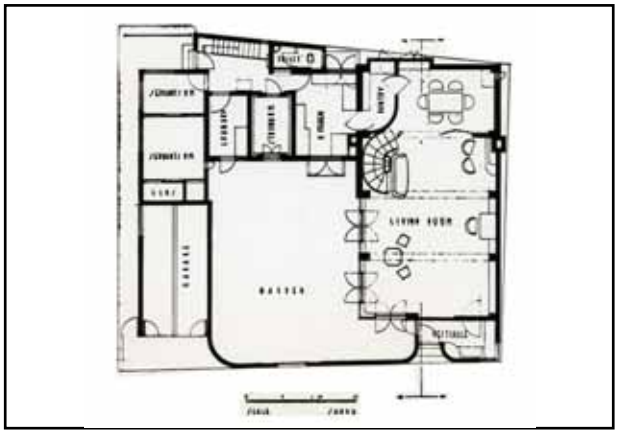
Typical frame in living room (1:20)



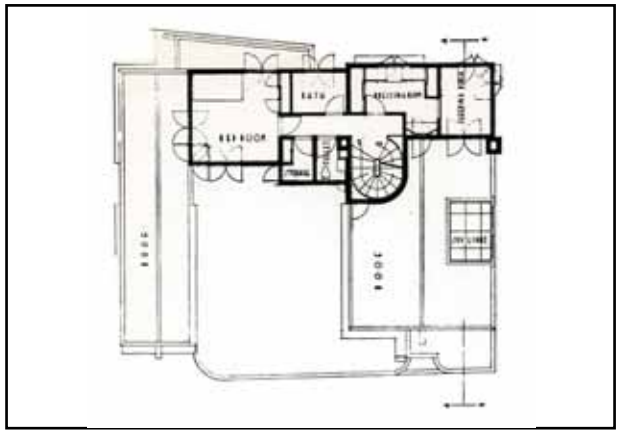
Plan and elevations (kitchen and pantry) (1:20)



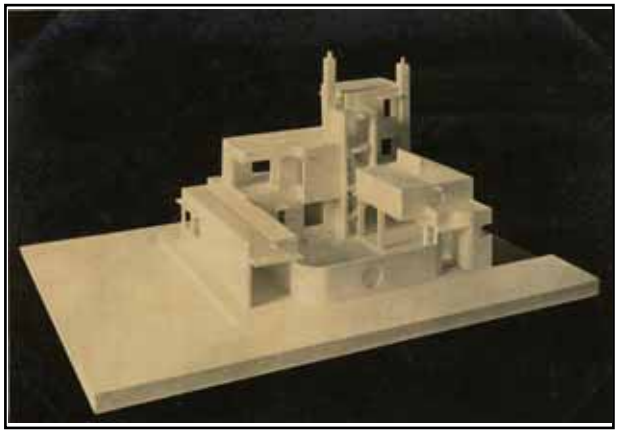
Glass doors and windows (1:20)



1F plan

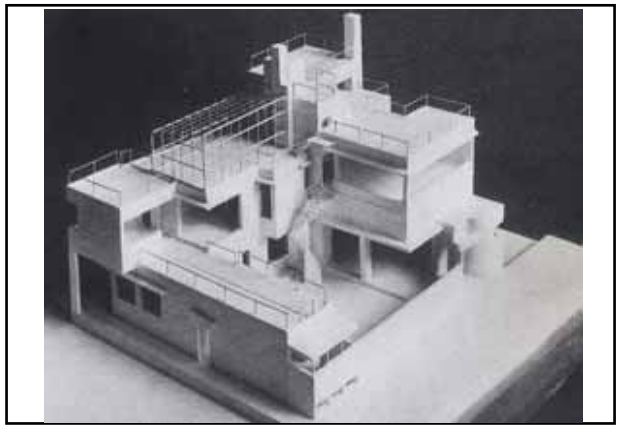


2F plan



Plaster model (south-east view)

Plaster model (north-east view)

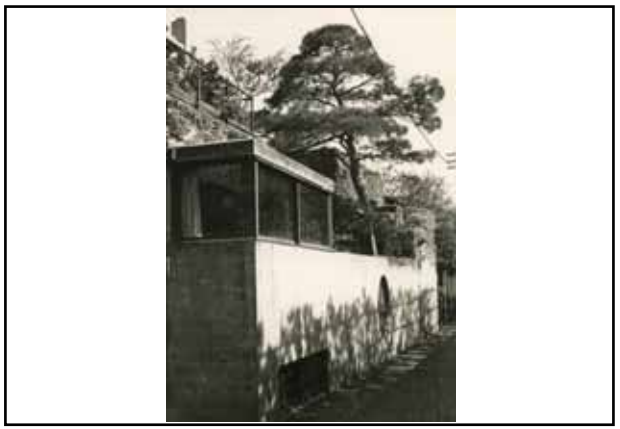


Early model of project

Street view (from south-east side)

View from opposite side of the street

View from opposite side of the street (remains of the 1923 earthquake in the foreground)



Sreet approach from south-east side

Sreet approach from north-east side

Entrance

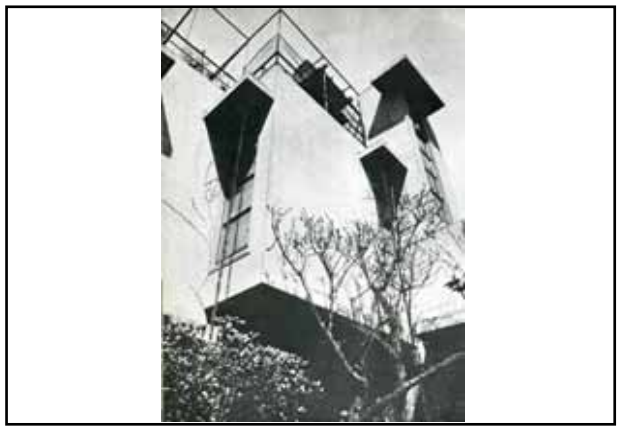
View of garden from roof garden

Roof garden

Detail of access to roof ggarden (east facade)

Facade detail

House under construction (view from street)



Second floor facade

Roof garden handrail (view from garden)

Roof garden handrail (on street side)

Facade details

Glass doors opening onto garden (1F)

View of dining area with staircase on the left and fireplace on the right (1F)

View of living area with door leading to the entrance in background (1F)

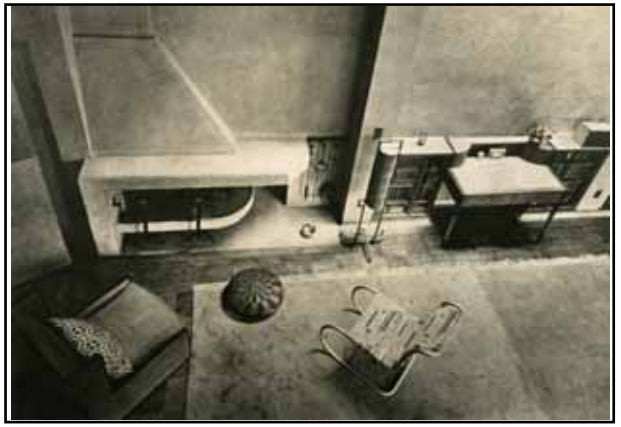
Living room skylight

View towards dining area with folding screens

View towards dining area with folding screens

Living room fireplace (textiles designed by N. Raymond)

Details (*ikebana* made by N. Raymond)



View of fireplace from landing (2F)

Kitchen (1F)

Kitchen cupboards

Kitchen gas cooker

Stairs

Stairs

View of living room towards entrance from landing (2F)

Dressing room (2F)

Dressing room (2F)

Bedroom (2F)

CLIENT/HOUSE: READ Dr. Rachel
レイチェール･リード先生

YEAR: 1924 / Taisho 13

CLIENT TYPE: Western

DESIGNER/DRAFTSMAN:

COMMISSION No.: 1131

LOCATION: Akasaka, Minato-ku, Tokyo

TYPE: Main residence

STRUCTURE: Wood

FLOOR AREA: approx. 40.25 *tsubo* (approx. 133 m^2)

CONDITION: Destroyed

OFFICE NAME: American Architectural and Engineering Co., Yurakucho, Ichome, Kojimachiku, Tokyo

ARCHITECTURAL DRAWINGS

Plans [X]: 1F (1:50)
2F (1:50)

Sections [X]: longitudinal (1:50 x 2; 1:20 x 1)
cross (1:50)

Elevations [X]: N, S, E, W (all 1:50)

Fittings [ ]:

Details [X]: fireplace

Drawings date: February 26, 1924 (all except 1F and 2F plans)

Drawings sources: Raymond Architectural Design Office, Tokyo; Raymond A. An Autobiography, Rutland, 1973; Japanese: 自伝アントニン･レーモンド，1970.

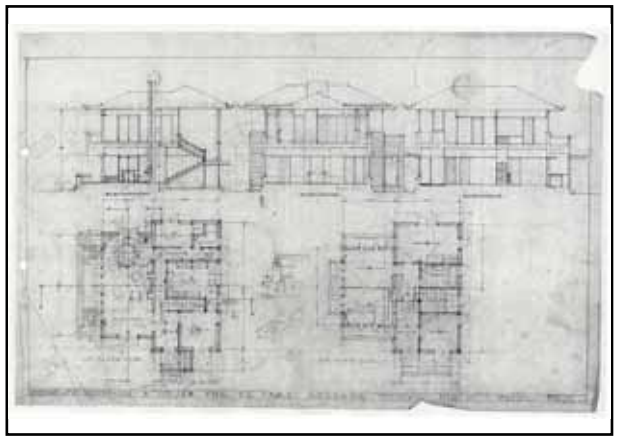
PHOTOS [X]: 1: exterior

Photo sources: Antonin Raymond's documents, courtesy of Kitazawa Koichi (北澤興一), Karuizawa.

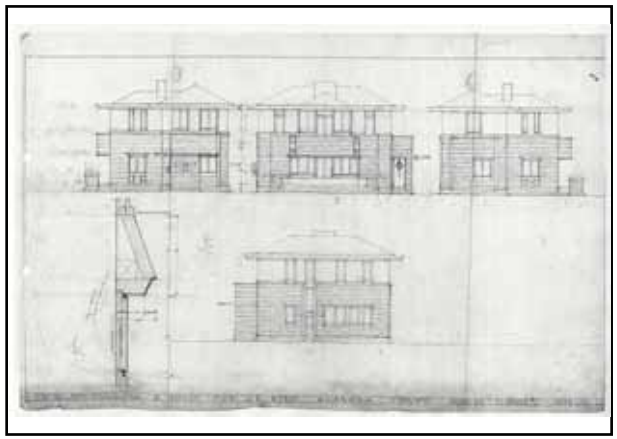
PUBLICATIONS

Kenchiku, April 1962, p.28; Raymond A., An Autobiography, Rutland, Vt.: Charles E. Tuttle, 1973, p. 103; Japanese: 自伝アントニン･レーモンド, 東京: 三一書房, 1970, p. 93.

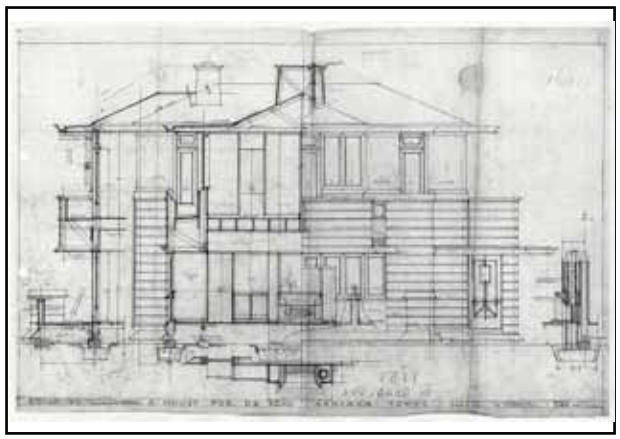
NOTES



Plans: 1F, 2F; Sections: cross, longitudinal, longitudinal (1:50)



Elevations: right, front, left, back; Detail of chimney (1:50)



Section (1:20)

Street view

CLIENT/HOUSE: TETENS A. P.
A. P. テテンス

YEAR: 1924-1925 / Taisho 13-14

CLIENT TYPE: Western

DESIGNER/DRAFTSMAN:

COMMISSION No.: 1155

LOCATION: Ōmori, Ota-ku, Tokyo

TYPE: Main residence

STRUCTURE: Reinforced concrete

FLOOR AREA: approx. 93.25 *tsubo* (approx. 308.3 m^2)

CONDITION:

OFFICE NAME: American Architectural and Engineering Co., 21 Mitsubishi bldg., Marunouchi, Tokyo

ARCHITECTURAL DRAWINGS

Plans [X]: B1 (1:50); 1F (1:50); 2F (1:50)

Sections [X]: Longitudinal (1:50); cross (1:50)

Elevations [X]: E, N (all 1:50)

Fittings [ ]:

Details [ ]:

Drawings date: May 30th, 1924

Drawings sources: Raymond Architectural Design office.

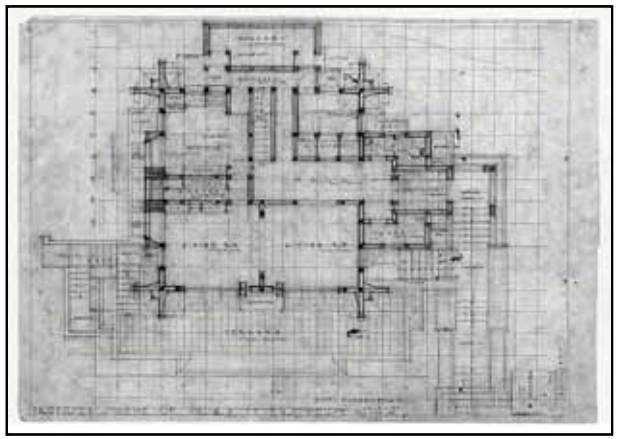
PHOTOS [X]: 8: exterior; model

Photo sources: Antonin Raymond's documents, courtesy of Kitazawa Koichi (北澤興一), Karuizawa.

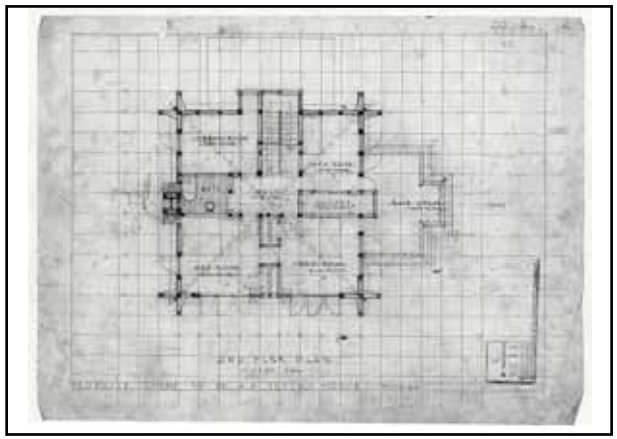
PUBLICATIONS

Kenchiku, April 1962, pp.30; Raymond A., An Autobiography, Rutland, Vt.: Charles E. Tuttle, 1973, p. 108; Japanese: 自伝アントニン・レーモンド, 東京: 三一書房, 1970, p. 98.

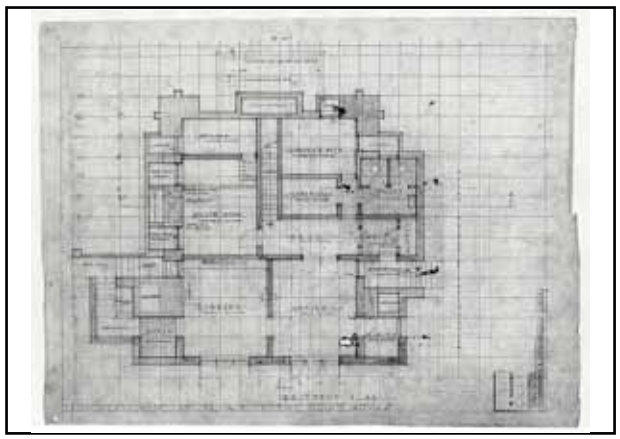
NOTES



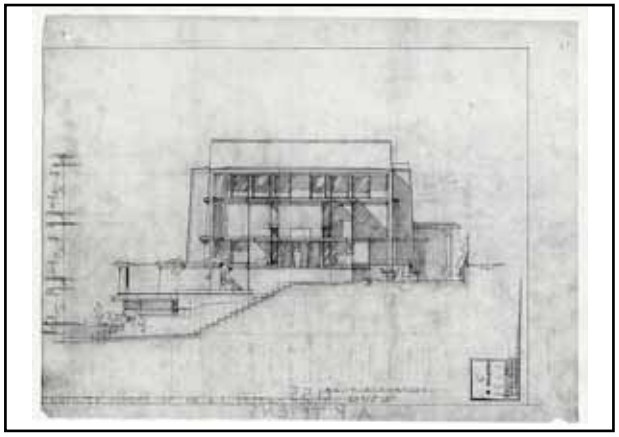
1F plan (1:50)



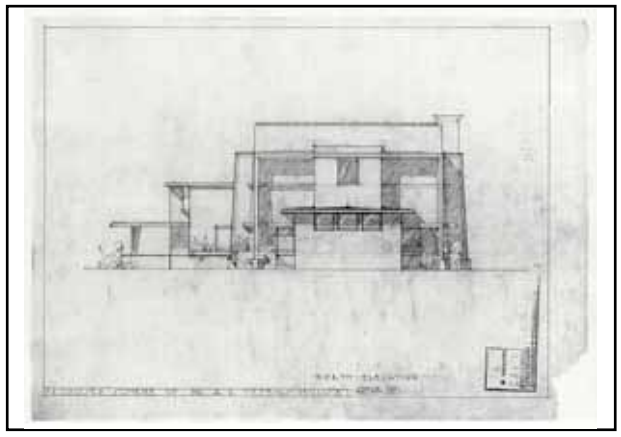
2F plan (1:50)



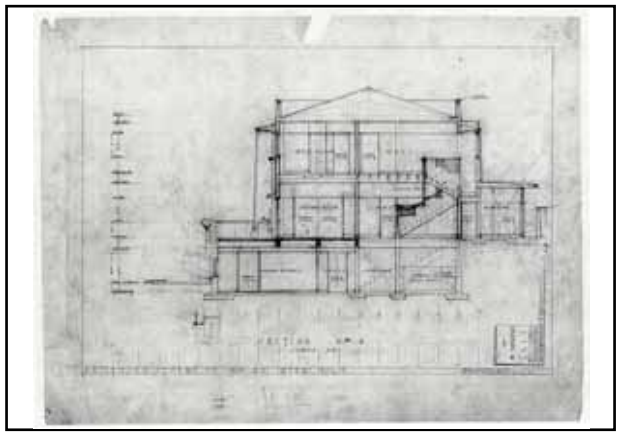
Basement plan (1:50)



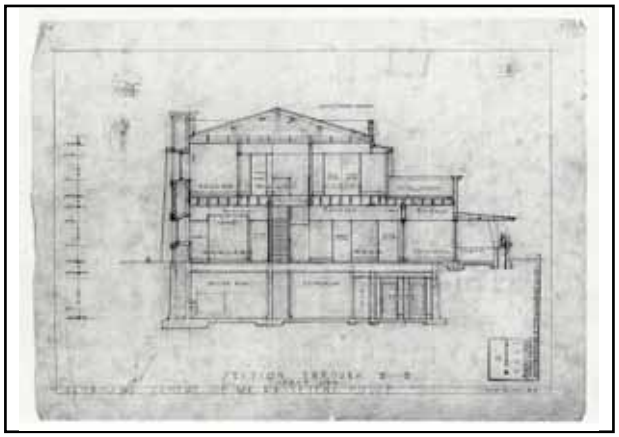
East elevation (1:50)



North elevation (1:50)



Cross section (1:50)



Longitudinal section (1:50)

Plaster model (south-west view)

Plaster model (south-east view)

The house in its surroundings (south-east)

View towards entrance porch on the right (east)

Front facade (south)

Front facade with entrance porch on the right (south-east view)

Rear facade (north)

Rear terrace (north)

CLIENT/HOUSE: HAMAO Viscountess
浜尾 子爵

YEAR: 1926-1927 / Shōwa 1-2

CLIENT TYPE: Japanese

DESIGNER/DRAFTSMAN: Uchiyama Keizō 内山隈三 (?)

COMMISSION No.: 1221

LOCATION: Tokyo

TYPE: Main residence

STRUCTURE: Wood

FLOOR AREA: 50.82 *tsubo* (168 m^2)

CONDITION: Demolished

OFFICE NAME: Raymond and Sykes, Architects, 21 Mitsubishi bldg., Marunouchi, Tokyo

ARCHITECTURAL DRAWINGS

Plans [X]
- 2F (1:50)
- foundation (1:50)
- 2F truss (1:50)
- framing: 1F, 2F (1:50)
- kitchen (1:20)

Sections [X]
- cross (1:50)
- longitudinal (1:50)
- kitchen (1:20)
- japanese room (1:20)
- living-dining room (1:20)

Elevations [X]: S, E, W, N (all 1:50)

Fittings [X]: kitchen

Details [X]
- foundations (1:20)
- kitchen (1:20)

Drawings date: July 1926 (Elevations, Sections and 2F plan)

Drawings sources:

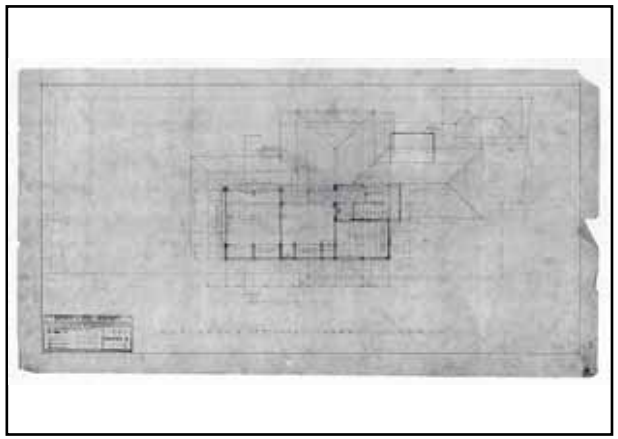
PHOTOS [X]: 4: exterior; interior

Photo sources: Antonin Raymond's documents, courtesy of Kitazawa Koichi (北澤興一), Karuizawa; Raymond A., An Autobiography, 1973; Helfrich Kurt G. F., Whitaker W. (ed.) Crafting a Modern World: The Architecture and Design of Antonin and Noémi Raymond, 2006.

PUBLICATIONS

Kenchiku, April 1962, p. 29; Raymond A., An Autobiography, Rutland, Vt.: Charles E. Tuttle, 1973, p. 118; Japanese: 自伝アントニン・レーモンド, 東京: 三一書房, 1970, p. 107; Helfrich Kurt G. F., Whitaker William (ed.) Crafting a Modern World: The Architecture and Design of Antonin and Noémi Raymond, New York: Princeton Architectural Press, 2006, p. 114.

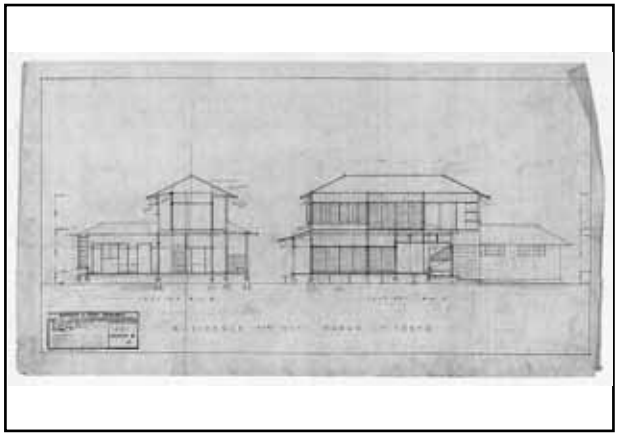
NOTES



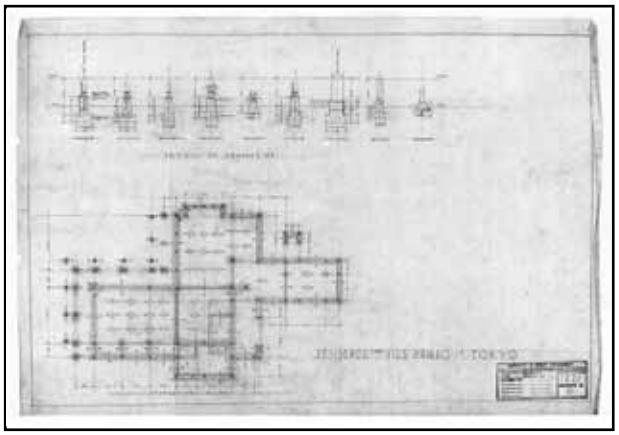
2F plan (1:50)

Elevations: south and east (1:50)

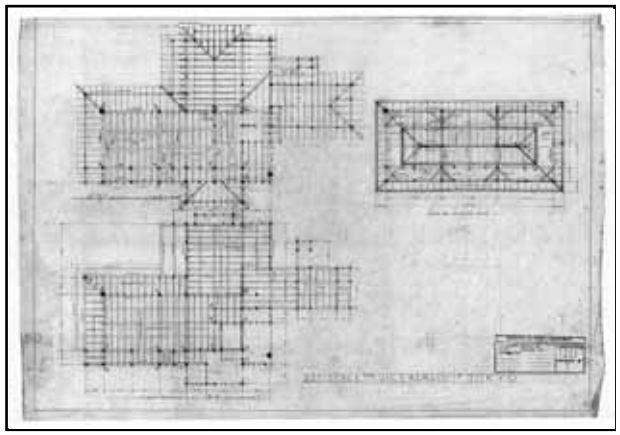
Elevations: west and north (1:50)



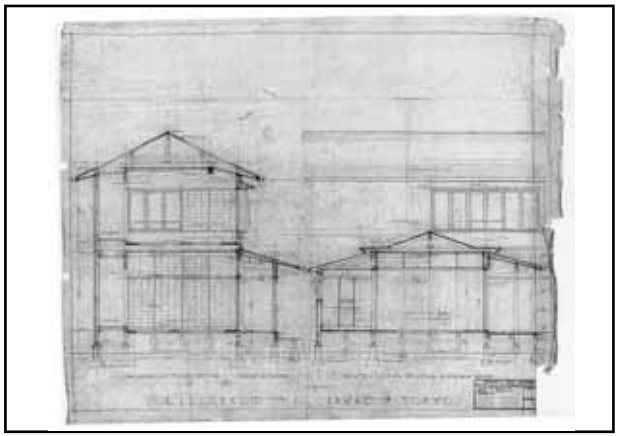
Sections: cross and longitudinal (1:50)



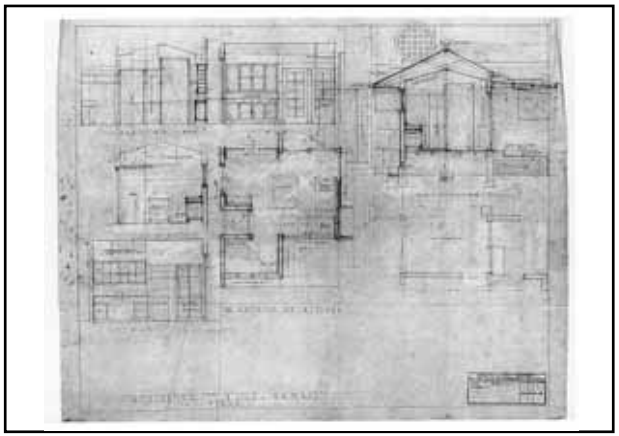
Foundation plan an details (1:50; 1:20)



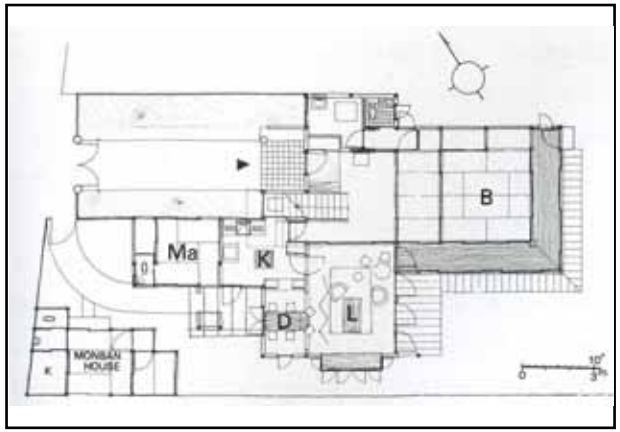
Framing plans: 1F and 2F; Truss plan: 2F (1:50)



Sections details: Japanese room and living-dinign room (1:20)



Detail of kitchen (1:20)



1F plan

Street approach with front gate (west)

East facade (view from garden)

Bedroom room (2F)

Stairs and landing (2F)

CLIENT/HOUSE: Italian Embassy
イタリア大使館

YEAR: 1927-1928 / Shōwa 2-3

CLIENT TYPE: Western

DESIGNER/DRAFTSMAN: Uchiyama Keizō 内山隈三

COMMISSION No.: 1243

LOCATION: Lake chuzenji, Nikko, Tochigi Prefecture

TYPE: Country villa

STRUCTURE: Wood

FLOOR AREA: 94 *tsubo* (approx. 311m^2)

CONDITION: Exstant

OFFICE NAME: Antonin Raymond, Architect, 21 Mitsubishi bldg., Marunouchi, Tokyo

ARCHITECTURAL DRAWINGS

Plans X: 1F (1:100); 2F (1:100)

Sections X: cross (1:100); longitudinal (1:100)

Elevations X: SW, NW, S, SW (all 1:100)

Fittings X:

Details X: fireplace for dining room and living room (1:20)

Drawings date: February 1rst, 1928

Drawings sources: Raymond Architectural Design office, Tokyo.

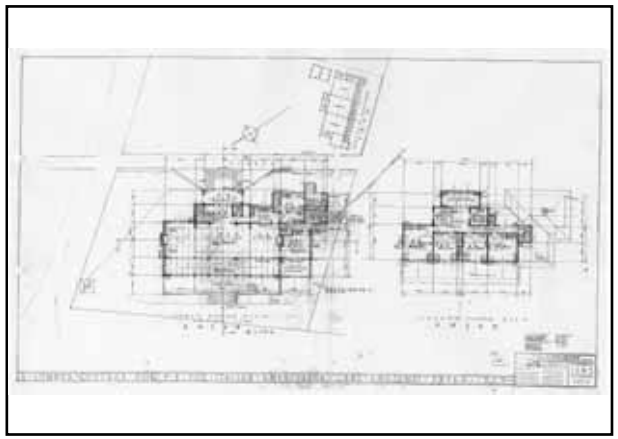
PHOTOS X: 6: exterior, interior

Photo sources: The Japan Architect, vol. 33, Spring 1999.

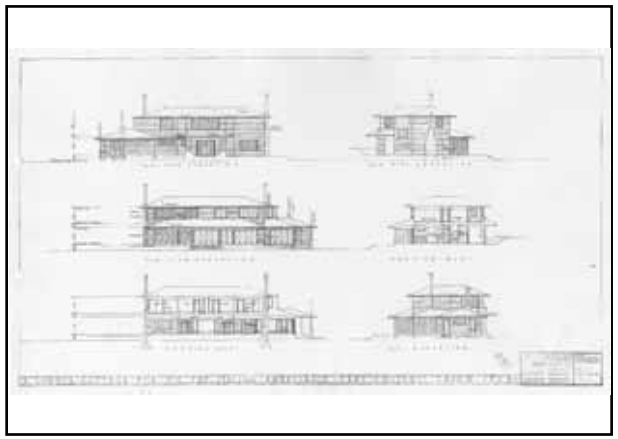
PUBLICATIONS

Kenchiku, April 1962, p. 29; Raymond A., An Autobiography, Rutland, Vt.: Charles E. Tuttle, 1973, p. 120; Japanese: 自伝アントニン・レーモンド, 東京: 三一書房, 1970, p. 109; JA 33, Spring 1999, pp. 36-43; Helfrich Kurt G. F., Whitaker W. (ed.) Crafting a Modern World: The Architecture and Design of Antonin and Noémi Raymond, New York: Princeton Architectural Press, 2006, pp. 112-113.

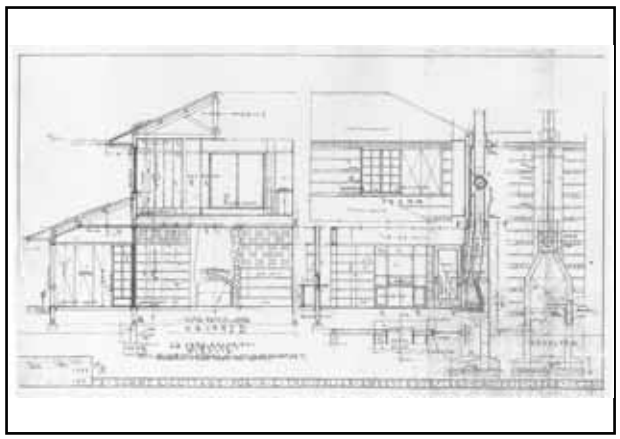
NOTES



Plans: 1F and 2F



Elevations: south-west, north-west, north-east; Sections: longitudinal



Details: firplace for dining room and living room

North-west facade

South-west facade

Dining room (1F)

Living room (1F)

Covered porch (1F)

Details

CLIENT/HOUSE: AKABOSHI Shirō
赤星 四郎

YEAR: 1931 / Shōwa 6

CLIENT TYPE: Japanese

DESIGNER/DRAFTSMAN: Yoshimura Junzō 吉村 順三

COMMISSION No.: 1280

LOCATION: Fujisawa, Kanagawa Prefecture

TYPE: Country villa

STRUCTURE: Wood

FLOOR AREA: 24 *tsubo* (approx. 79m^2)

CONDITION: Moved

OFFICE NAME: Antonin Raymond, Architect, 708 Yaesu bldg., Marunouchi, Tokyo

ARCHITECTURAL DRAWINGS

Plans [X]: plot (1:200)

Sections [X]: bedroom (1:50)
living room (1:50)

Elevations [X]: S (1:100 + 1:50); E, N, W, (1:50); Upper ground house: S, E, (1:50)

Fittings [ ]:

Details [ ]:

Drawings date: June 1rst, 1931

Drawings sources: Raymond Architectural Design Office; Antonin Raymond's documents, courtesy of Kitazawa Koichi (北澤興一), Karuizawa.

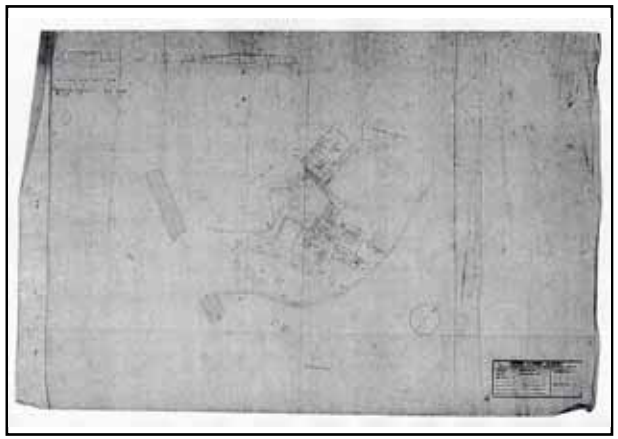
PHOTOS [X]: 4: exterior, interior

Photo sources: Antonin Raymond's documents, courtesy of Kitazawa Koichi (北澤興一), Karuizawa; Helfrich Kurt G. F., Whitaker W. (ed.) Crafting a Modern World: The Architecture and Design of Antonin and Noémi Raymond, 2006.

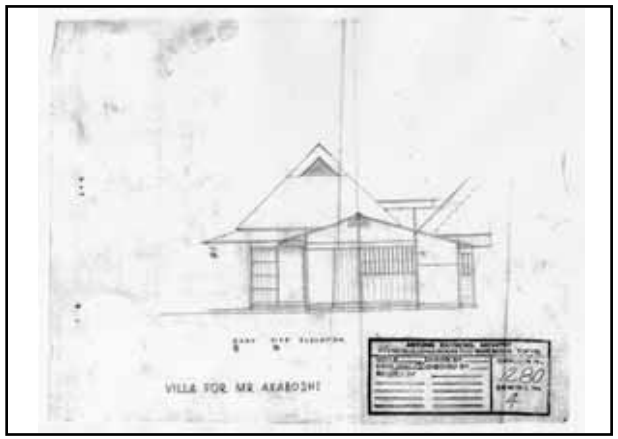
PUBLICATIONS

Kenchiku, April 1962, pp. 30; Helfrich Kurt G. F., Whitaker W. (ed.) Crafting a Modern World: The Architecture and Design of Antonin and Noémi Raymond, New York: Princeton Architectural Press, 2006, p. 115.

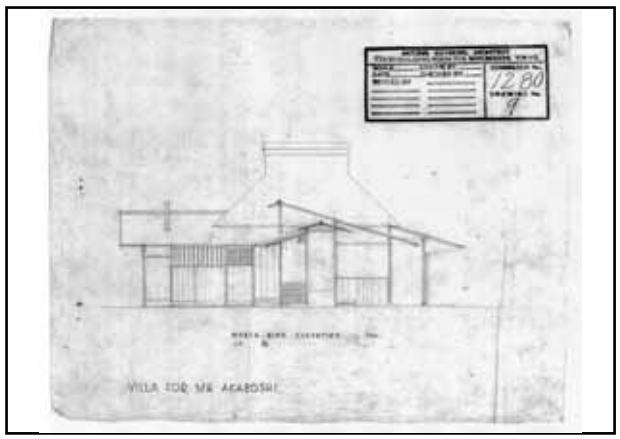
NOTES



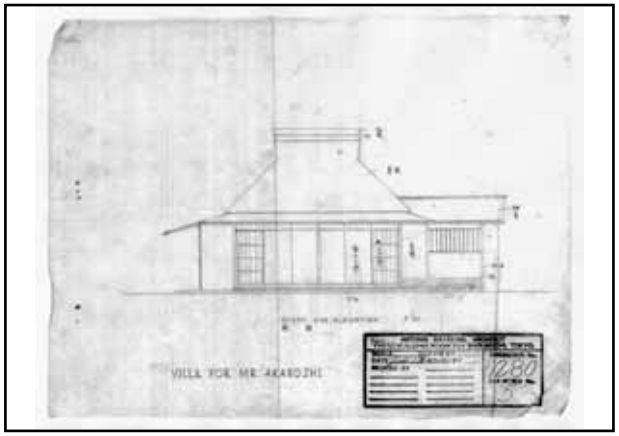
Plan



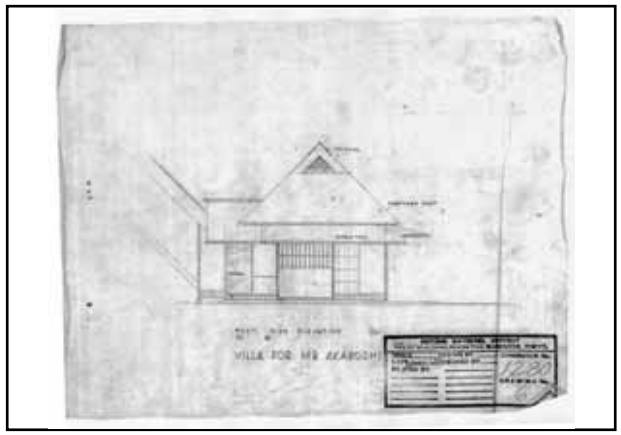
East elevation



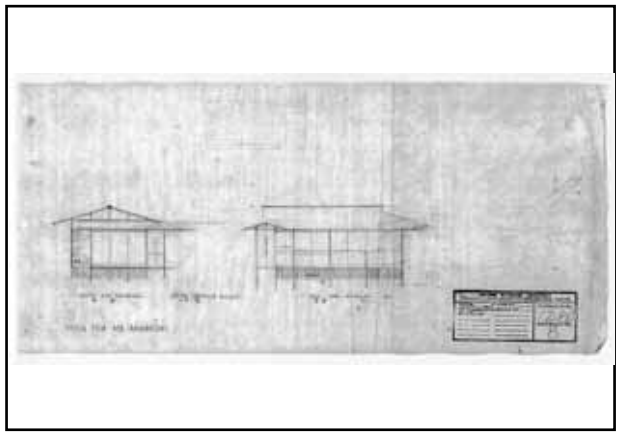
North elevation



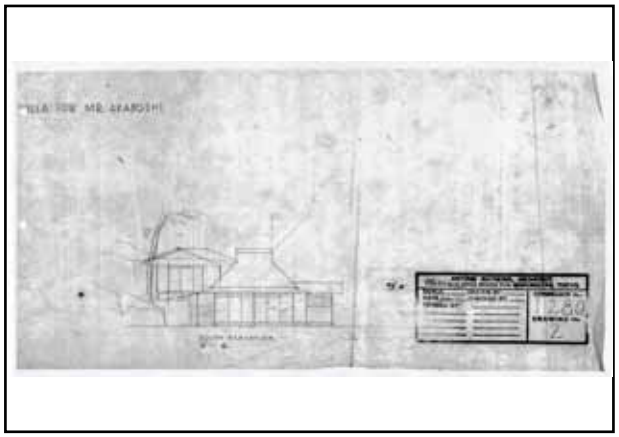
South elevation



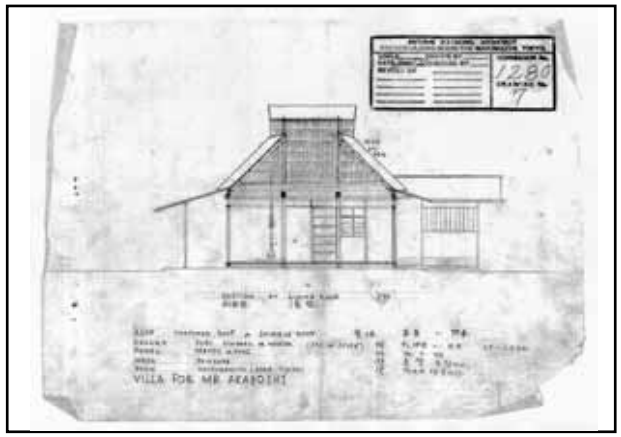
West elevation



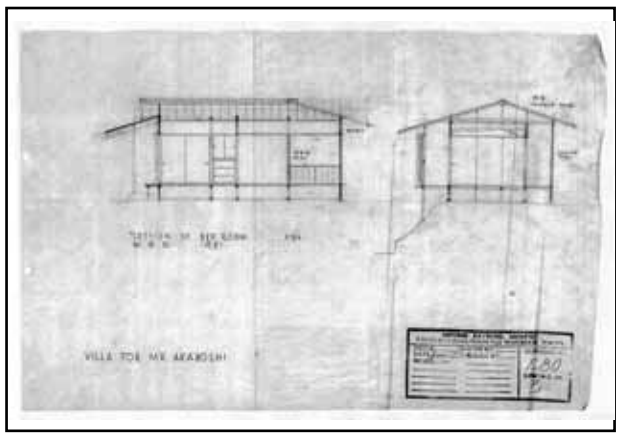
Upper ground house: south and east elevations



South elevation

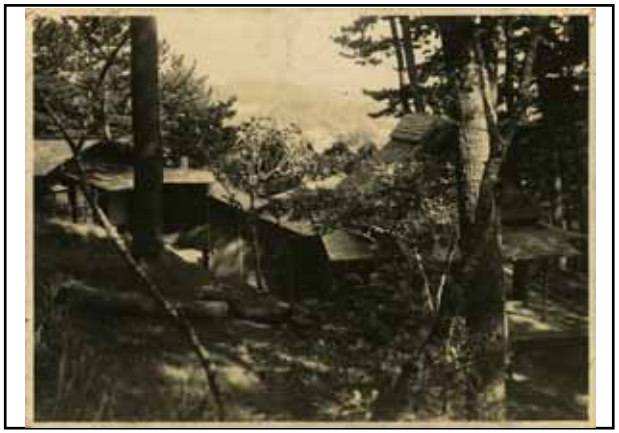


Section: living room



Section: bedroom

Main view (from north-west side)



Main view (from west side)

South facade of lower building

Interior

CLIENT/HOUSE: AKABOSHI Kisuke
赤星 喜助

YEAR: 1931-32 / Shōwa 6-7

CLIENT TYPE: Japanese

DESIGNER/DRAFTSMAN:

COMMISSION No.: 1287

LOCATION: Tanakawa, Minato-ku, Tokyo

TYPE: Main residence

STRUCTURE: Reinforced concrete

FLOOR AREA: approx. 67.5 *tsubo* (approx. 223.2 m^2)

CONDITION:

OFFICE NAME: Antonin Raymond, Architect, 708 Yaesu bldg., Marunouchi, Tokyo

ARCHITECTURAL DRAWINGS

Plans [X]
- plot (1:100)
- 1F (1:100)
- 2F (1:100)
- 3F (1:100)
- 4F (1:100)

Sections [X]
- longitudinal (x3) (1:50)
- cross (1:50)
- Situation section

Elevations [X] S, E, N, W (all 1:50)

Fittings [ ]

Details [ ]

Drawings date: December 24th, 1931 (all except situation section)

Drawings sources: Raymond Architectural Design Office, Tokyo; Antonin Raymond's documents, courtesy of Kitazawa Koichi (北澤興一), Karuizawa.

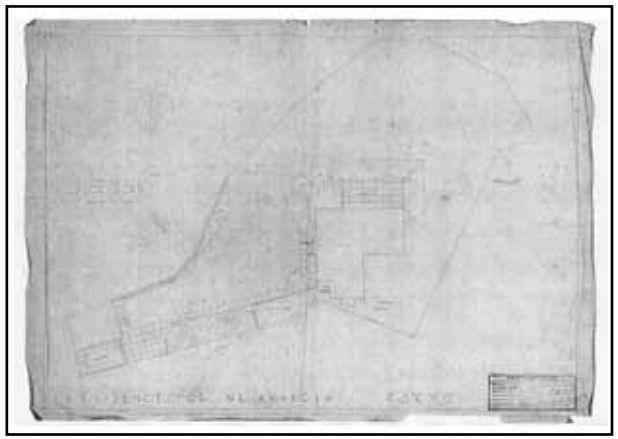
PHOTOS [X] 17: exterior, interior

Photo sources: Antonin Raymond's documents, courtesy of Kitazawa Koichi (北澤興一), Karuizawa; Raymond A., An Autobiography, Rutland, 1973; Helfrich Kurt G. F., Whitaker W. (ed.) Crafting a Modern World: The Architecture and Design of Antonin and Noémi Raymond, 2006.

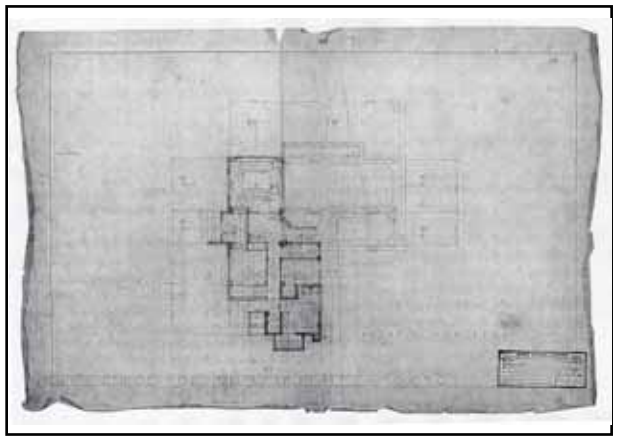
PUBLICATIONS

Architectural Record, Jan. 1933, vol. 73, pp. 48-53; Raymond A., An Autobiography, Rutland, Vt.: Charles E. Tuttle, 1973, p. 135; Japanese: 自伝アントニン・レーモンド, 東京: 三一書房, 1970, p. 124; Helfrich Kurt G. F., Whitaker W.(ed.) Crafting a Modern World: The Architecture and Design of Antonin and Noémi Raymond, New York: Princeton Architectural Press, 2006, p. 135.

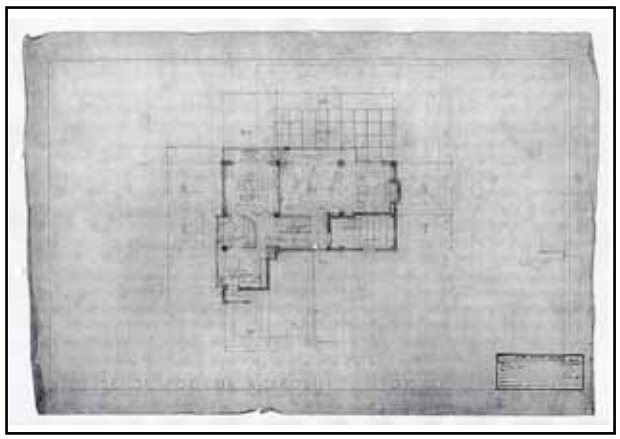
NOTES



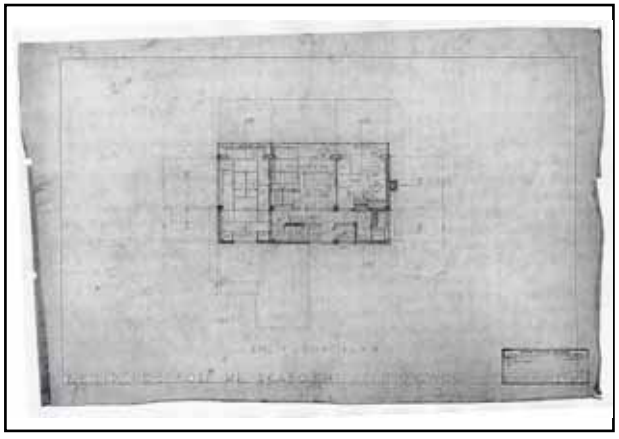
Plot plan



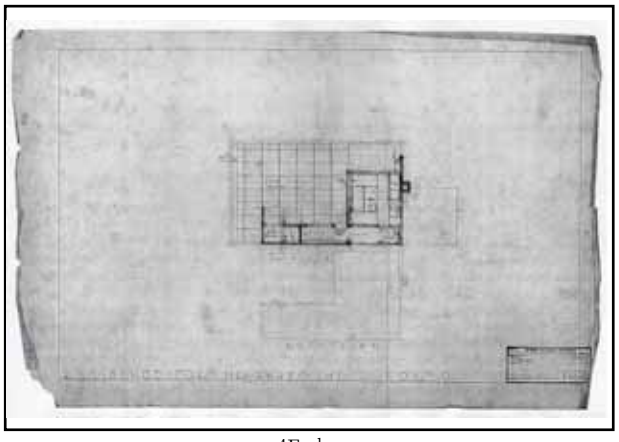
1F plan



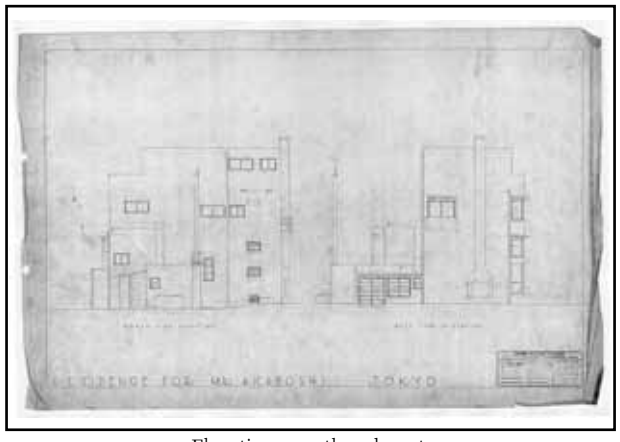
2F plan



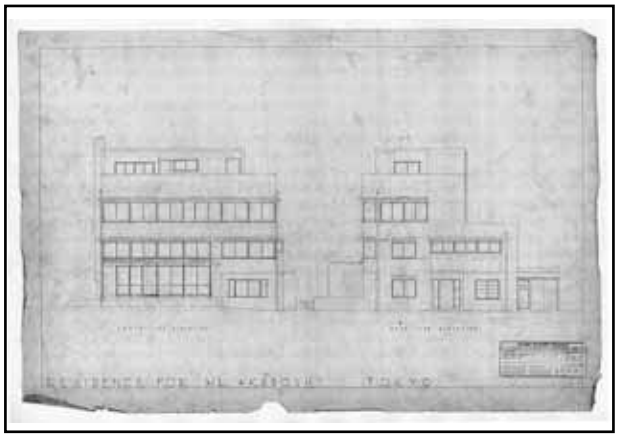
3F plan



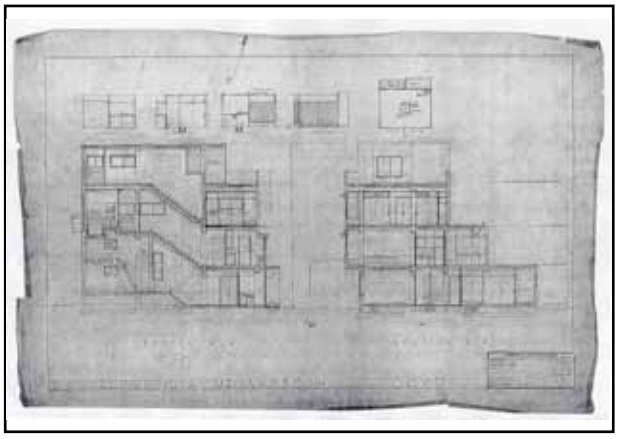
4F plan



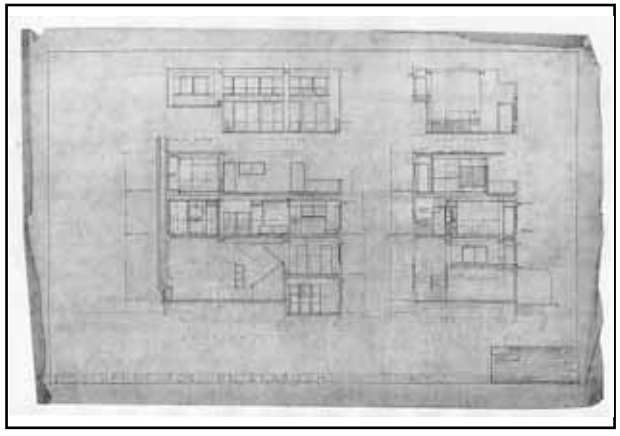
Elevations: north and west



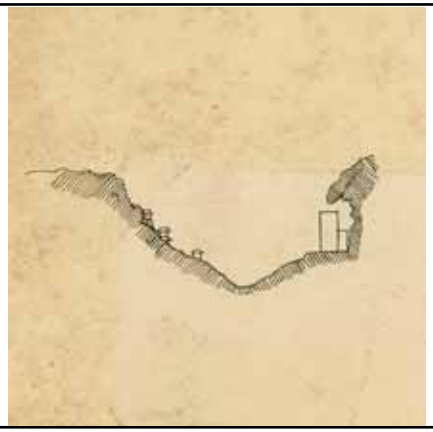
Elevations: south and east



Sections: longitudinal and cross



Sections: longitudinal and cross



Situation section

South facade

South facade with stairs leading to garden

Approach and entrance on the east facade

Roof garden

Entrance hall

Living room with staircase seen from mezzanine (1F)

Living room (1F)

Mezzanine with folding screen in the background (2F)

Mezzanine (2F)

Mezzanine with windows opening onto the garden and living room fireplace below (2F)

Mezzanine (2F)

Children's bedroom (3F)

children's bedroom (3F)

Madam's bedroom, with door opening onto children's room (3F)

Japanese room (4F)

Japanese room opening onto roof garden (4F)

Kitchen (2F)

CLIENT/HOUSE: HATOYAMA Hideo (A house)
鳩山 ヒデオ

YEAR: 1932-1933 / Shōwa 7-8

CLIENT TYPE: Japanese

DESIGNER/DRAFTSMAN:

COMMISSION No.: 1294

LOCATION: Koishikawa, Bunkyo-ku, Tokyo

TYPE: Main residence

STRUCTURE:

FLOOR AREA:

CONDITION:

OFFICE NAME: Antonin Raymond, Architect, 708 Yaesu bldg., Marunouchi, Tokyo

PUBLICATIONS

Shinkenchiku, vol. 9, 1933, pp. 169-175.

ARCHITECTURAL DRAWINGS

Plans [X]: plot (1:100); 1F (1:50); 2F (1:50)

Sections [X]: longitudinal (x1) (1:50); cross (x1) (1:50)

Elevations [X]: W, E (all 1:50)

Fittings [X]: (1:50)

Details [ ]:

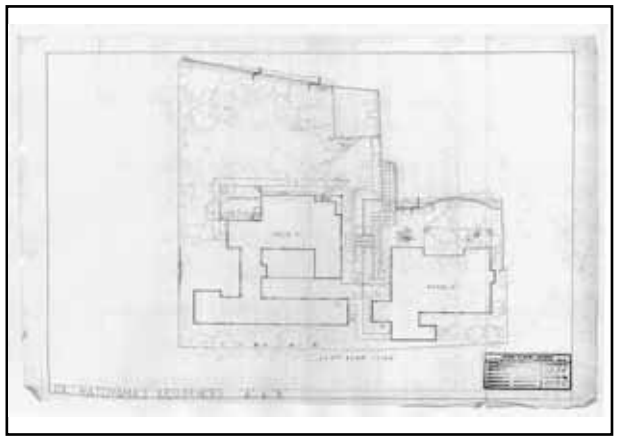
Drawings date: Oct. 3d, 14th 1932; Feb. 22d, April, 1933

Drawings sources: Raymond Architectural Design Office.

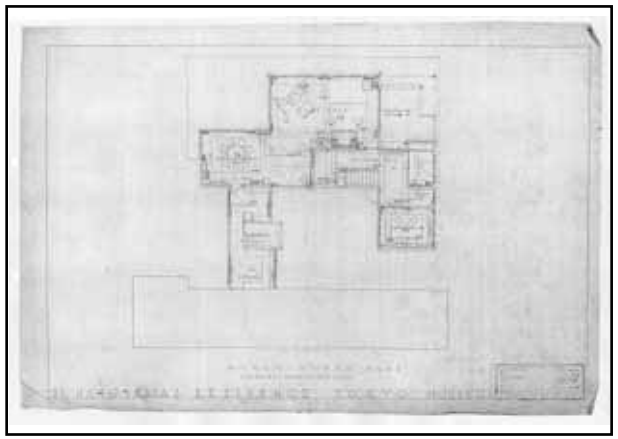
NOTES

PHOTOS [X]: 10: interior, exterior

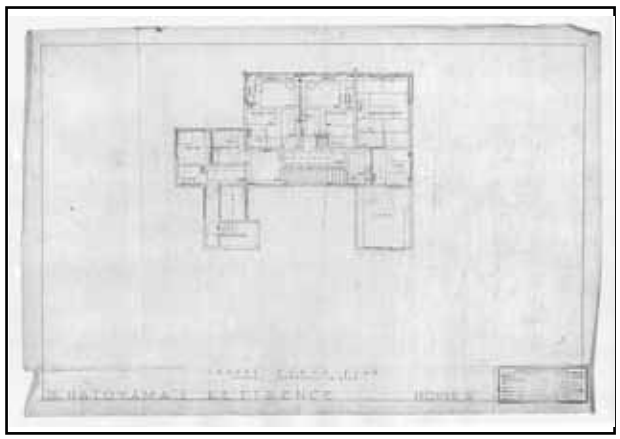
Photo sources: Antonin Raymond's documents, courtesy of Kitazawa Koichi (北澤興一), Karuizawa.



Plot plan (1:100)

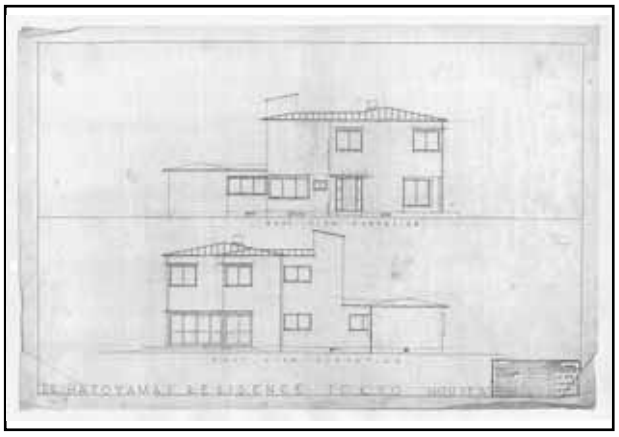


1F plan (1:50)

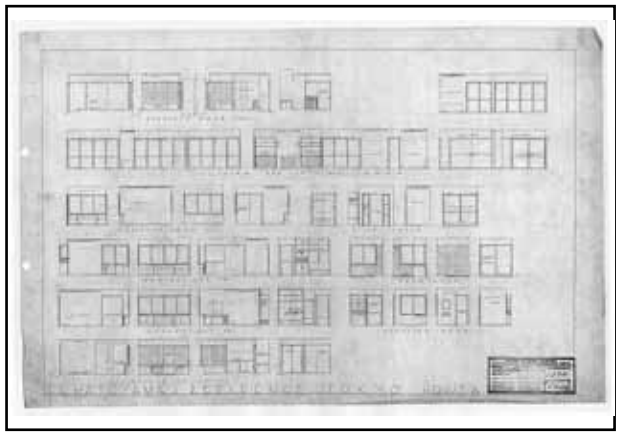


2F plan (1:50)

Sections: longitudinal and cross (1:50)



Elevations: west and west (1:50)



Interior elevations (1:50)

Rear facade (south)

South facade detail and B house in the background

Dining room (1F)

Sitting room with sliding doors opening onto Japanese room on the far right (1F)

Living room and dining room in the background (1F)

Living room (1F)

View of the Japanese room from the living room (1F)

Living room (1F)

Master's bedroom (2F)

Madam's bedroom (2F)

CLIENT/HOUSE: HATOYAMA Michio (B house)
鳩山 ミチオ

YEAR: 1932-1933 / Shōwa 7-8

CLIENT TYPE: Japanese

DESIGNER/DRAFTSMAN:

COMMISSION No.: 1294

LOCATION: Koishikawa, Bunkyo-ku, Tokyo

TYPE: Main residence

STRUCTURE:

FLOOR AREA:

CONDITION:

OFFICE NAME: Antonin Raymond, Architect, 708 Yaesu bldg., Marunouchi, Tokyo

PUBLICATIONS

Shinkenchiku, vol. 9, 1933, pp. 169-175.

ARCHITECTURAL DRAWINGS

Plans X
plot
1F, 2F (1:50)
foundation (1:50)
2F beam (1:50)
roof (1:50)

Sections X
longitudianl (x1) (1:50)
cross (x1) (1:50)

Elevations X: S, E, W, N (all 1:50); framing

Fittings X: (1:50)

Details X: foundation (1:20)

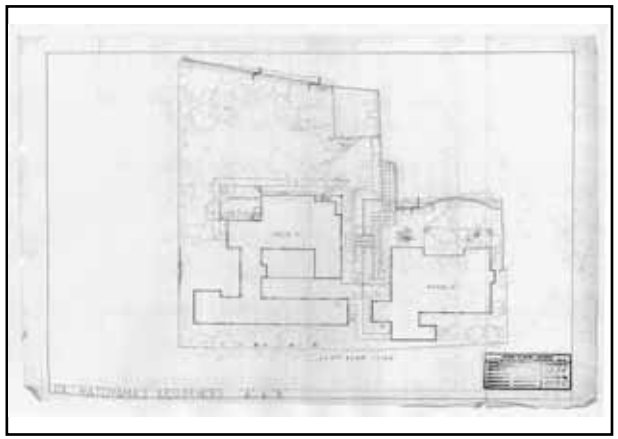
Drawings date: Oct. 3d, 14th 1932; Feb. 22d, April, 1933

Drawings sources: Raymond Architectural Design Office.

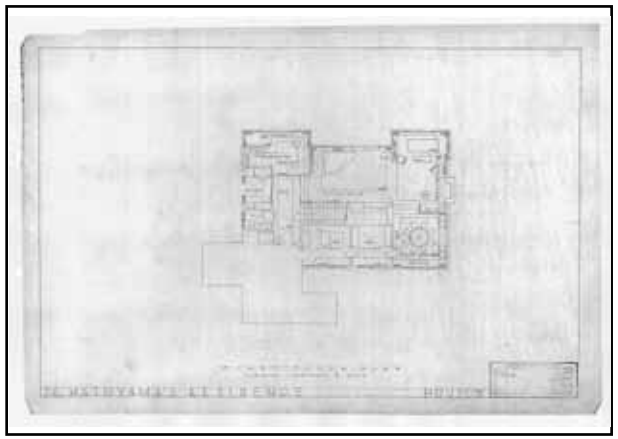
PHOTOS X: 6: interior, exterior

Photo sources: Antonin Raymond's documents, courtesy of Kitazawa Koichi (北澤興一), Karuizawa.

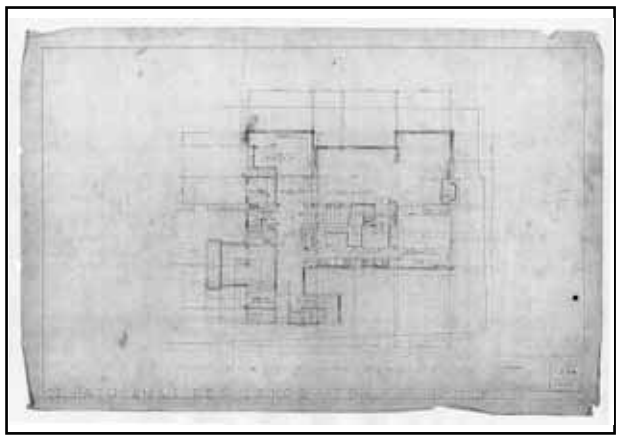
NOTES



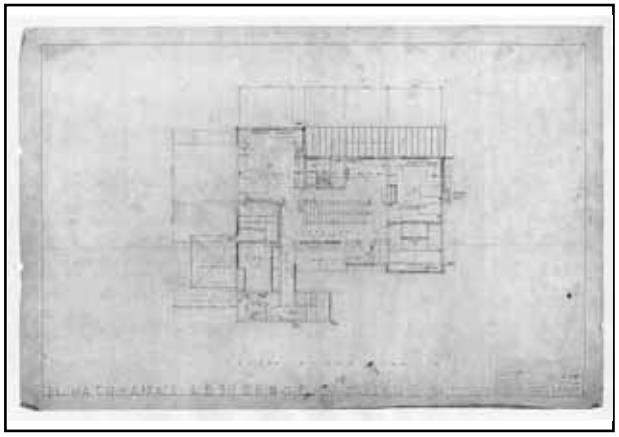
Plot plan (1:100)



1F plan (1:50)



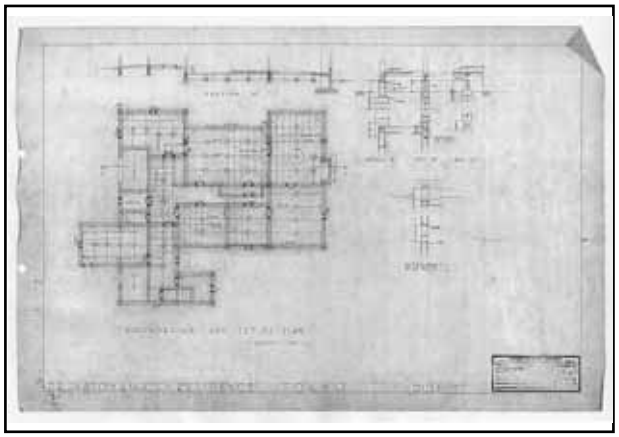
2F plan (1:50)



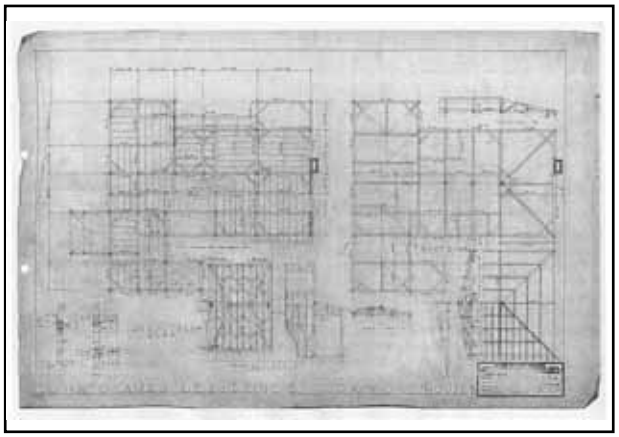
3F plan (1:50)

Sections: longitudinal and cross; Elevation: north (1:50)

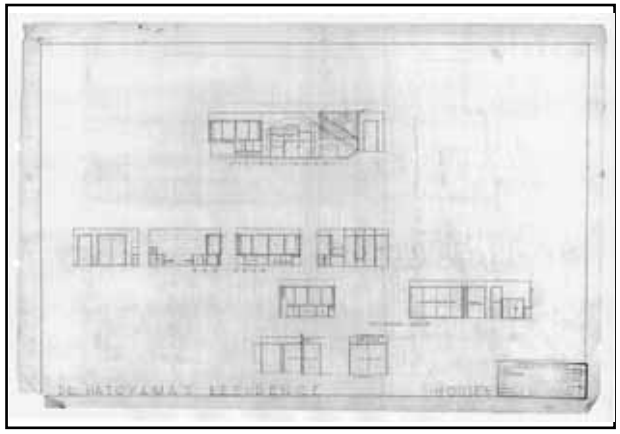
Elevations: south, east, west (1:50)



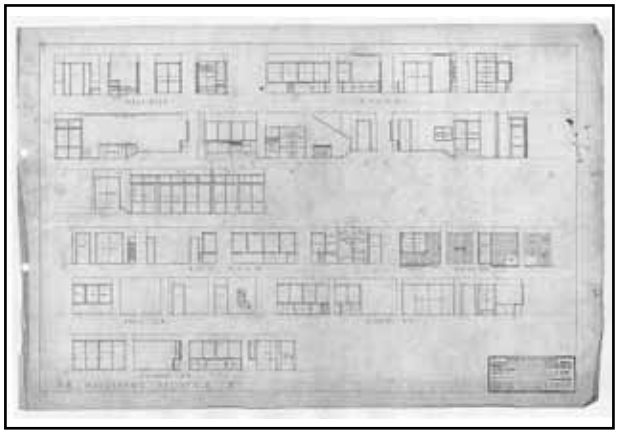
Floor plan: foundation and 1F (1:50)



Beam plan: 2F and roof (1:50)



Interior elevations: living room, bedroom, children room (1:50)



Interior elevations: vestibule, study, living room, bedroom, children's room, bathroom, dressing room, Japanese room (1:50)

Rear facade (south)

Living room and dining room in the background (1F)

Living room with fireplace on the right (1F)

Living room, dining room with staircase and kitchen unit in the background (1F)

Living room seen from the entrance hall with staircase on the right (1F)

Living room seen from the entrance hall with staircase on the right (1F)

CLIENT/HOUSE: RAYMOND Antonin (Karuizawa house)
アントニン・レーモンド (軽井沢夏の家)

YEAR: 1933 / Shōwa 8

CLIENT TYPE: Western

DESIGNER/DRAFTSMAN: Sugiyama Masanori 杉山雅則

COMMISSION No.: 1299

LOCATION: Karuizawa, Nagano Prefecture

TYPE: Summer house

STRUCTURE: Wood

FLOOR AREA: (197 m^2)

CONDITION: Moved to Karuizawa Taliesin and altered.

OFFICE NAME: Antonin Raymond, Architect, 708 Yaesu bldg., Marunouchi, Tokyo

ARCHITECTURAL DRAWINGS

Plans [X]: foundation
1F (with garden)
2F

Sections [X]: longitudinal

Elevations [X]: N

Fittings [ ]:

Details [ ]:

Drawings date: May 4th, 1933 (foundation)

Drawings sources: Raymond Architectural Design Office, Tokyo; The Japan Architect, vol. 33, spring 1999.

PHOTOS [X]: 42: exterior, interior, details (original and present condition)

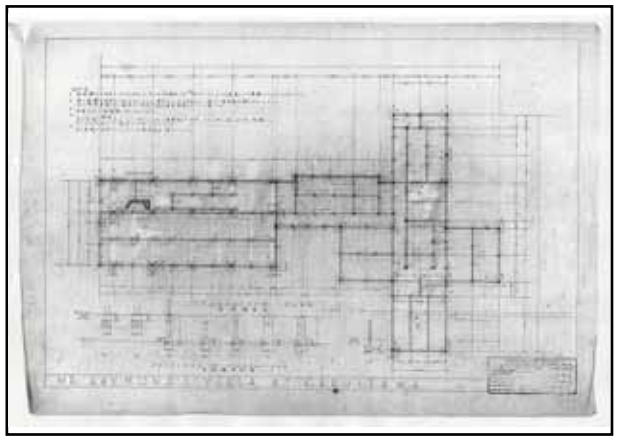
Photo sources: Antonin Raymond's documents, courtesy of Kitazawa Koichi (北澤興一), Karuizawa; Raymond A., An Autobiography, 1973; The Japan Architect, vol. 33, spring 1999; Present condition photos by Y. Gloaguen, May 2002.

PUBLICATIONS

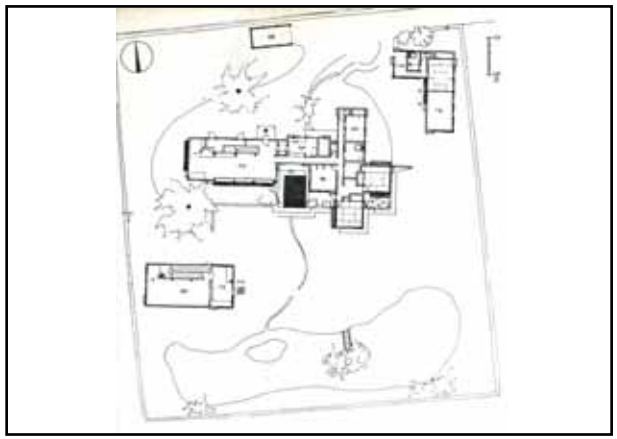
Shinkenchiku, vol. 9, 1933, pp. 185-188; Architectural Records, vol. 75, 1934, pp. 432-437; Kenchiku, Oct. 1961, pp. 78-79; Raymond A., An Autobiography, Rutland, Vt.: Charles E. Tuttle, 1973, p. 130; Japanese: 自伝アントニン・レーモンド, 東京: 三一書房, 1970, pp. 118-121; Antonin reimondo, genzai nihon kenchiku zenshū ichi (アントニン・レイモンド, 現代日本建築全集一, 東京: 三一書房, 1971, pp. 79-81; The Japan Architect, vol. 33, spring 1999, pp. 28-29; Helfrich Kurt G. F., Whitaker W. (ed.) Crafting a Modern World: The Architecture and Design of Antonin and Noémi Raymond, New York: Princeton Architectural Press, 2006, pp. 155-159.

NOTES

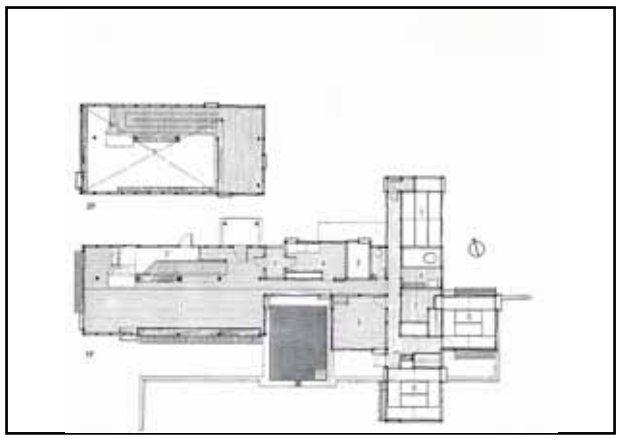
Karuizawa house was dismantled and partly rebuilt at Karuizawa Taliesin, karuizawa, Nagano Prefecture. It presently houses the Peynet Museum.



Foundation plan

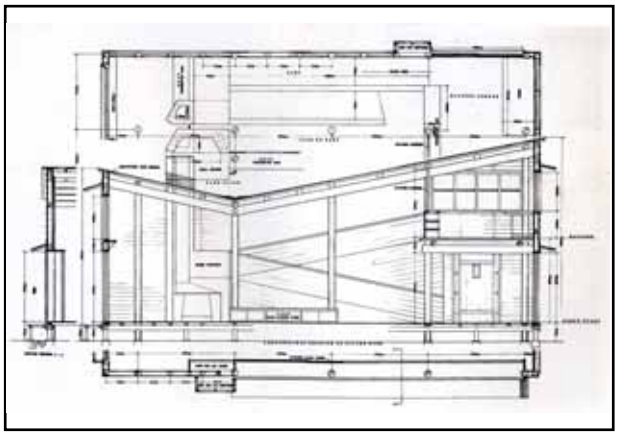


Floor and plot plan



Plans: 1F and 2F

Longitudinal section and north elevation



Living room section and ramp plan

karuizawa house in its surroundings, with Mount Asama in the background

South-east view

South view

South-east view (with *sudare* blinds)

South-east view (with *sudare* blinds) with pond in the foreground

South-east view (with *sudare* blinds) with pond in the foreground

Bedrooms (south-east)

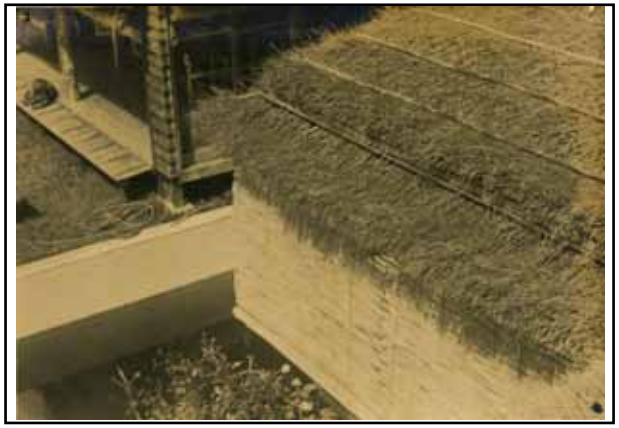
Pool, bedrooms in the background and living room engawa in the foreground (south)

View of pool and bedroom from second floor

Pool, living room (1F) and studio above (2F)

View of living room accross from bedroom

Living room with engawa



Thatched roof (larch)

Studio (2F)

Thatched roof (larch)

Living room with ramp and fireplace

Living room

Living room

Living room when all the sliding doors have been removed and stored away

Living room from studio (2F)

Ramp

Living room and fireplace

Raymond family with members of staff and members of the Oka family: Noémie Raymond (4th from left), Maekawa Kunio (6th from left), Antonin Raymond (center), Claude Raymond (3d from right), Sugiyama

Children playing in the pool

Around the dining table (Noémie raymond siting at the end)

Karuizawa house after larch twigs have been removed from roof (south)

Karuizawa house after larch twigs have been removed from roof (west)

Karuizawa house after larch twigs have been removed from roof (south)

CLIENT/HOUSE: KAWASAKI Morinosuke
川崎 守之助

YEAR: 1933-1934 / Shōwa 8-9

CLIENT TYPE: Japanese

DESIGNER/DRAFTSMAN:

COMMISSION No.: 1298

LOCATION: Azabu, Minato-ku, Tokyo

TYPE: Main residence

STRUCTURE: Reinforced concrete

FLOOR AREA: (800 m^2)

CONDITION: Demolished

OFFICE NAME: Antonin Raymond, Architect, 708 Yaesu bldg., Marunouchi, Tokyo

ARCHITECTURAL DRAWINGS

Plans [X]: plot, foundation (all 1:100)
1F, 2F, roof (all 1:100)
framing: BF; 1F; 2F; roof (1:100)
garden, dining, pantry and kitchen (1:20)

Sections [X]: longitudinal (x3) (1:100)
cross (x3) (1:100)
braces (1:20)

Elevations [X]: E, N, W, S (all 1:100)

Fittings [X]: bedroom, bath room (all 1:20)

Details [X]: typical structural details (1:20), kura (1:20 + 1:50)

Drawings date: September 25th, 1933; November 14th, 17th, 1933 (Elev., floor plans, sections, kitchen and dinign room plan, framing plans, typical structural details, kura, interior elevations).

Drawings sources: Raymond Architectural Design Office, Tokyo; Antonin Raymond's documents, courtesy of Kitazawa Koichi (北澤興一), Karuizawa

PHOTOS [X]: 57: building site, exterior, interior

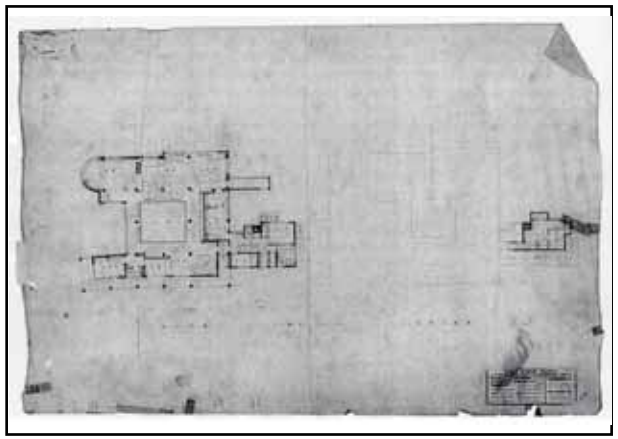
Photo sources: Antonin Raymond's documents, courtesy of Kitazawa Koichi (北澤興一), Karuizawa; Antonin reimondo, genzai nihon kenchiku zenshū ichi (アントニン･レイモンド, 現代日本建築全集一, 1971; Raymond A., An Autobiography, 1973;Helfrich Kurt G. F., Whitaker W. (ed.) Crafting a Modern World: The Architecture and Design of Antonin and Noémi Raymond, 2006.

PUBLICATIONS

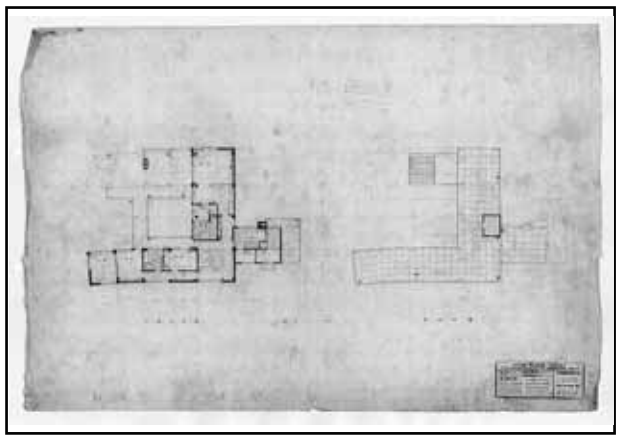
Architectural Record, May 1934, vol. 75, pp. 438-443; Shinkenchiku, vol. 11, 1935, pp. 1-9; Raymond A., An Autobiography, Rutland, Vt.: Charles E. Tuttle, 1973, p. 136; Japanese: 自伝アントニン･レーモンド, 東京: 三一書房, 1970, p. 123; Antonin reimondo, gendai nihon kenchiku zenshū ichi (アントニン･レイモンド, 現代日本建築全集一, 東京：三一書房, 1971, pp. 110-113; The Japan Architect, vol. 33, spring 1999, pp. 54-55; Helfrich Kurt G. F., Whitaker W. (ed.) Crafting a Modern World: The Architecture and Design of Antonin and Noémi Raymond,

NOTES

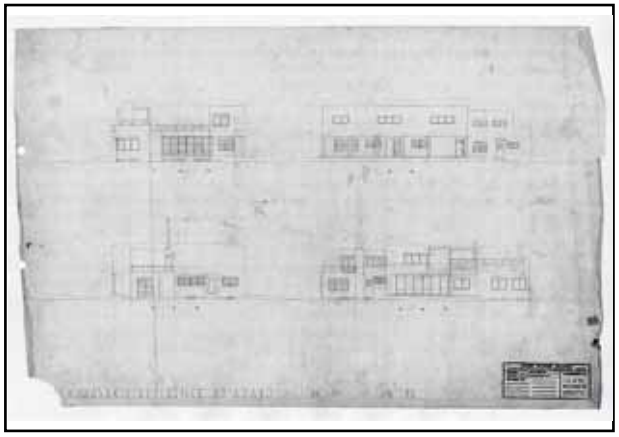
Plot plan (1:100)



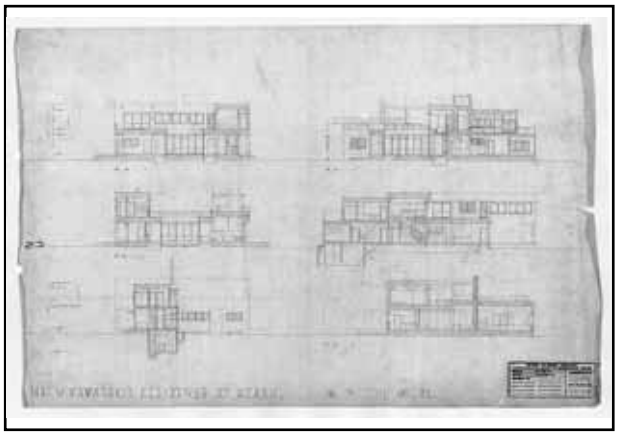
1F and basement plan (1:100)



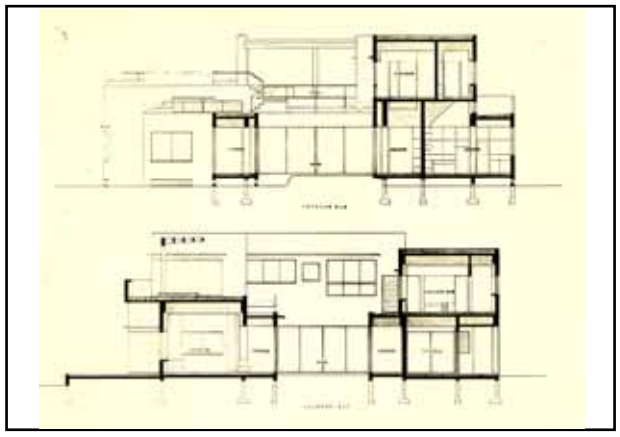
2F and roof plans (1:100)



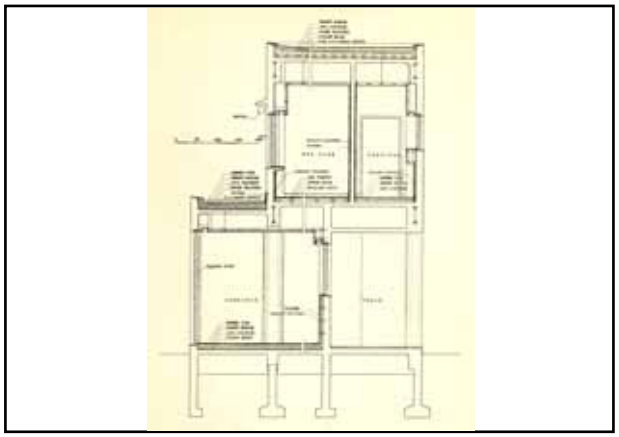
Elevations: east, north, west and south (1:100)



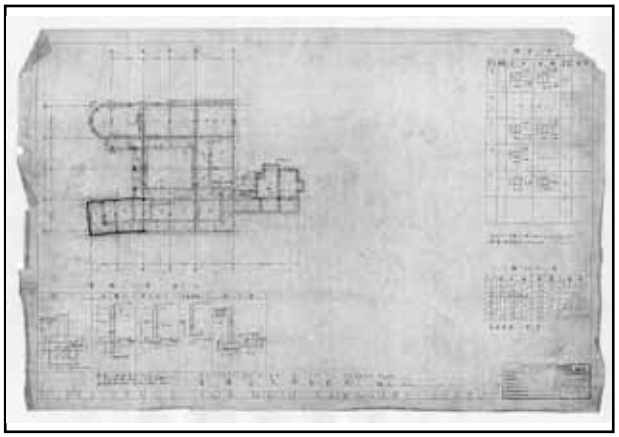
Sections: cross and longitudinal



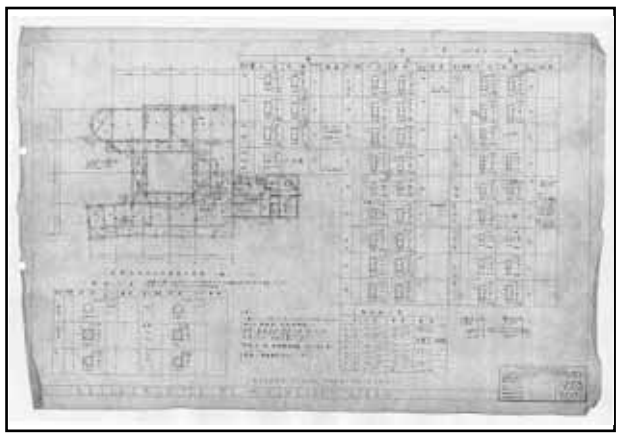
Cross sections



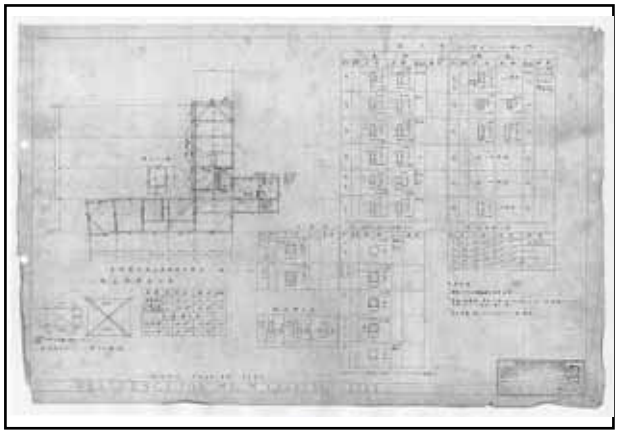
Section detail



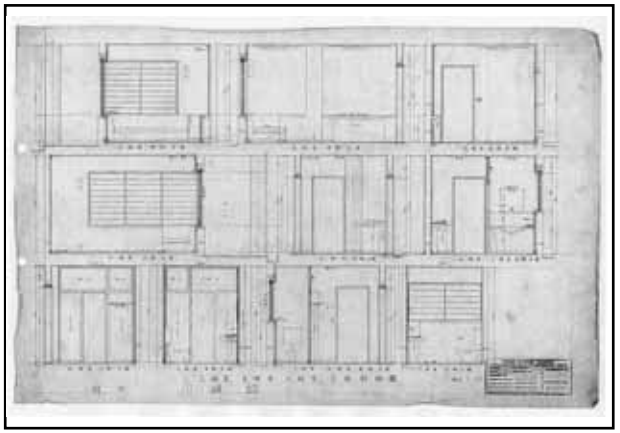
Foundation plan and 1F framing plan (1:100)



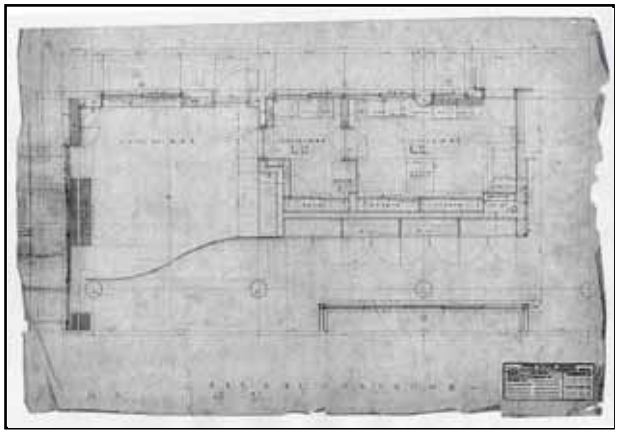
2F framing plan (1:100)



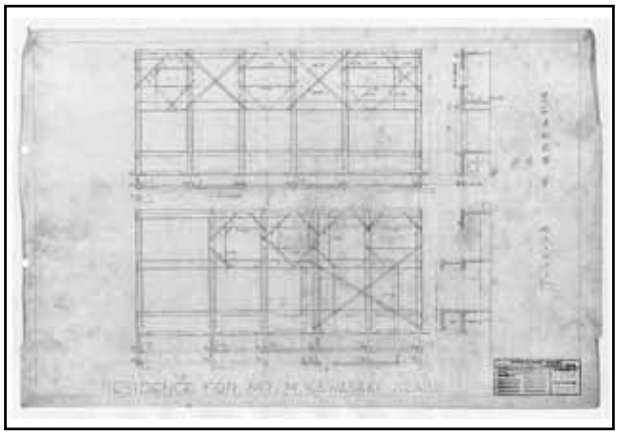
Roof framing plan (1:100)



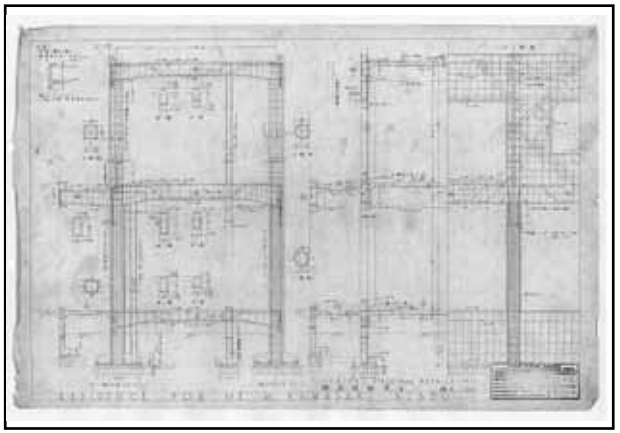
Interior elevations (reception room, dressing room and lavatory) (1:20)



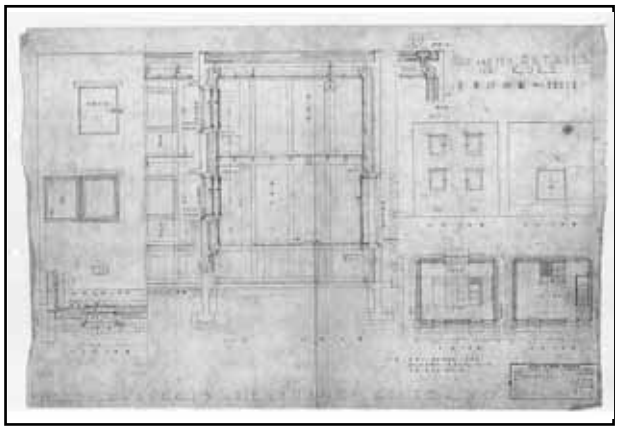
Kitchen plan (1:20)



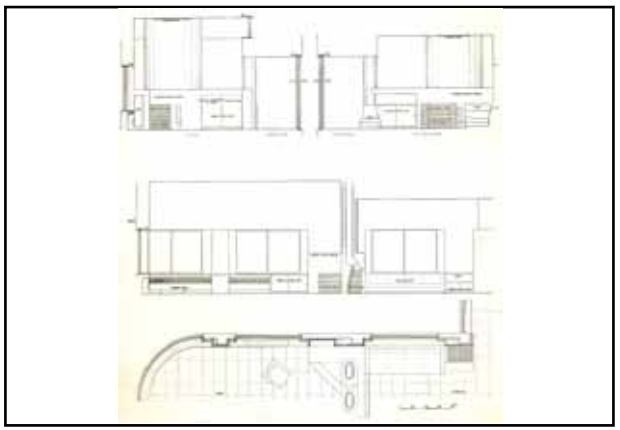
Steel bars (1:20)



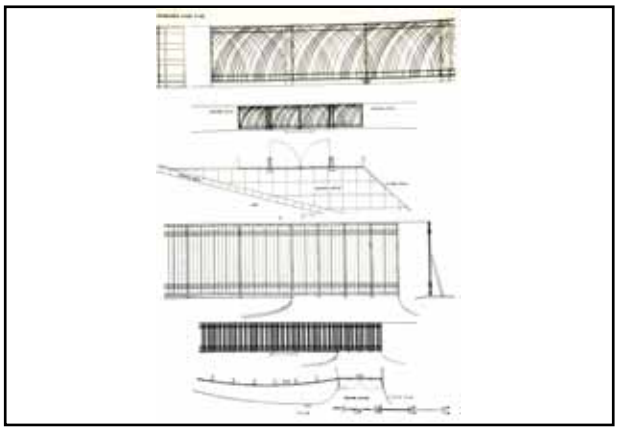
Typical structural details (1:20)



Kura: plans, elevations and details (1:20; 1:50)

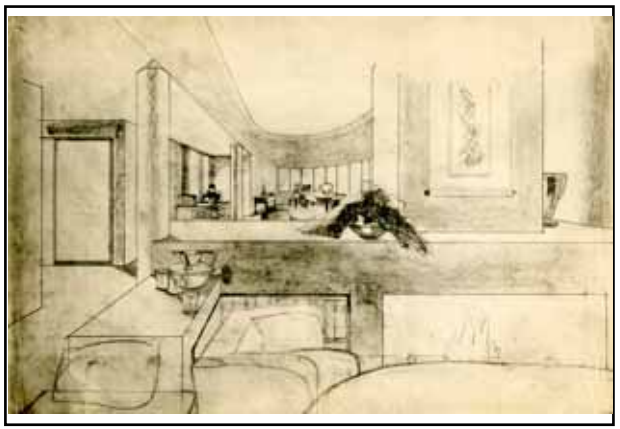


Living room details

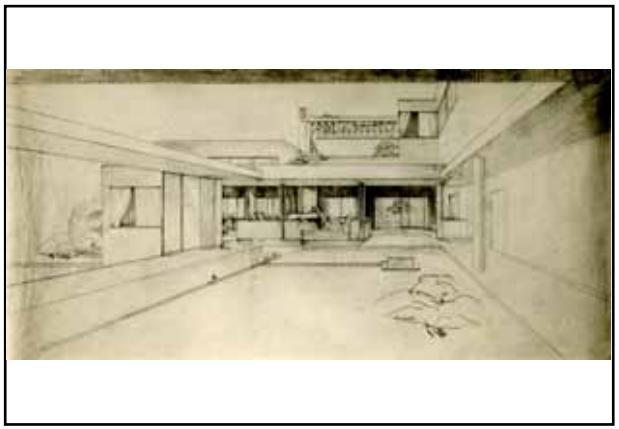


Entrance gate details

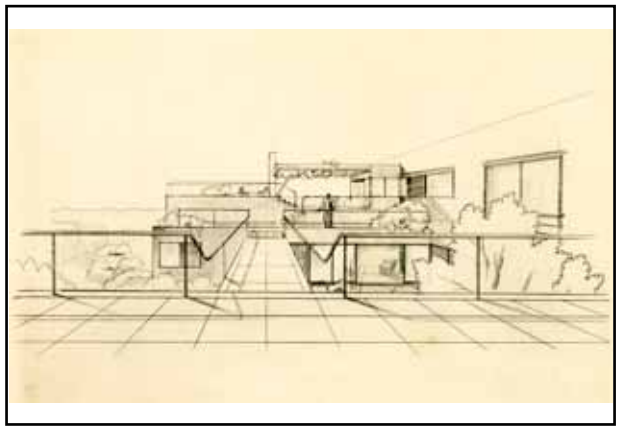
Perspective drawing: approach



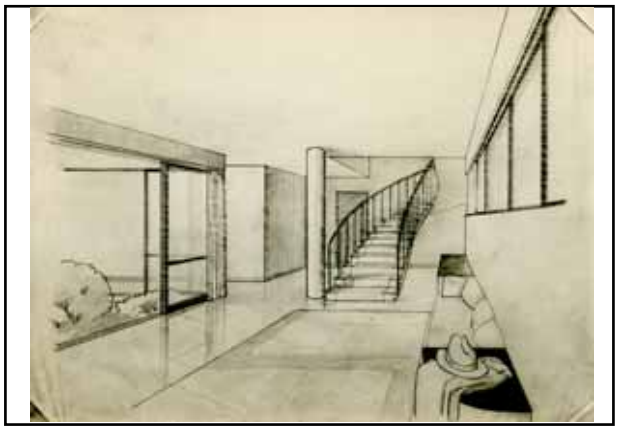
Perspective drawing: living room



Perspective drawing: patio



Perspective drawing: roof garden



Perspective drawing: entrance

Approach with entrance gate (north)

North facade (north-west view)

South facade (south-east view)

East facade (left part)

East facade with patio and pool

East facade (right part)

North facade (north-east view)

Japaneses quarters and kura (store house) on the left (north west view)

Japaneses quarters and kura (store house) on the left (north west view)

Kura with fireproof door

Kura with fireproof windows(right)

Living room (south)

Living room sliding doors (south)

Corridor leading to patio (east)

Patio with licing room in the background

patio

Patio and living room

View of patio from roof garden

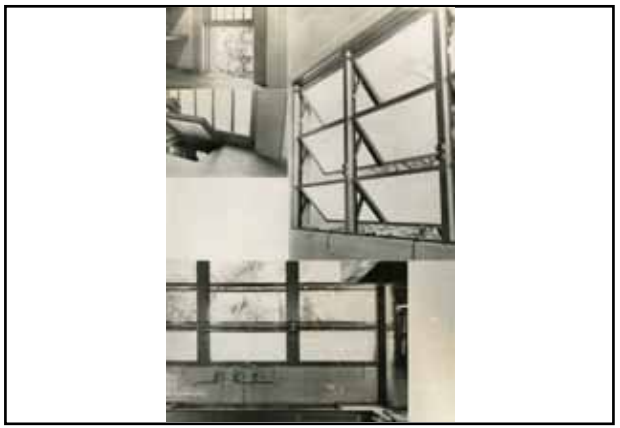
Roof garden

Roof garden

Roof garden above lounge

Roof garden above lounge and patio

Roof garden overlooking patio



Window details

View of patio from living room (1F)

Living room (1F)

Living room (1F)

Dining room (1F)

Corner fireplace in lounge (1F)

Sliding screens between dining room and living room (1F)

Lounge (1F)

Entrance hall with stairs on the right and access door from *genkan* (front door) in the center (1F)

Stairs (1F)

Staircase

Kitchen (1F)

Child's room with adjacent Japanese room 82F)

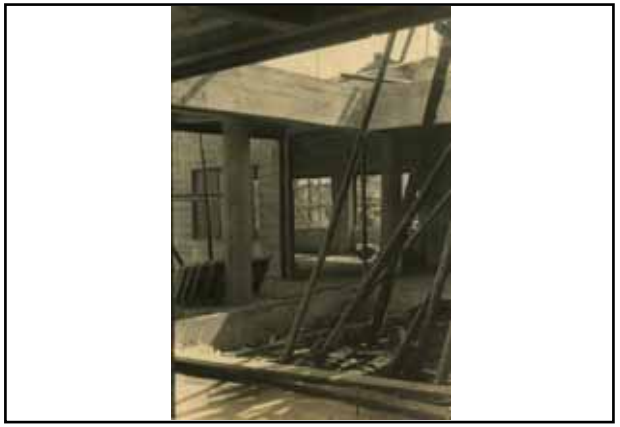
Child's room dressing table with *fusuma* (thick paper sliding doors) closing the adjacent Japanese room (2F)

Master bedroom (2F)

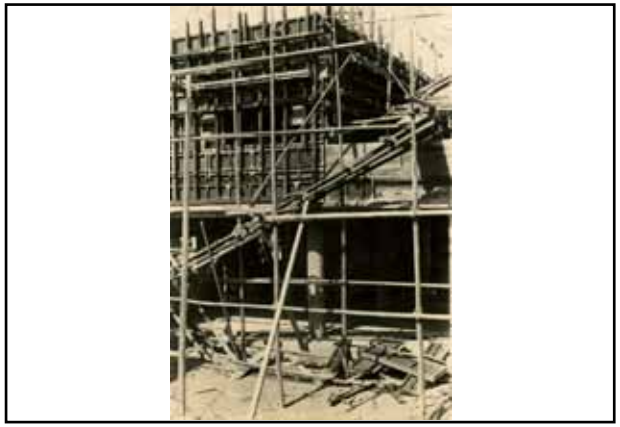
Building site: living room with fireplace on the right

living room

Stairs



Patio

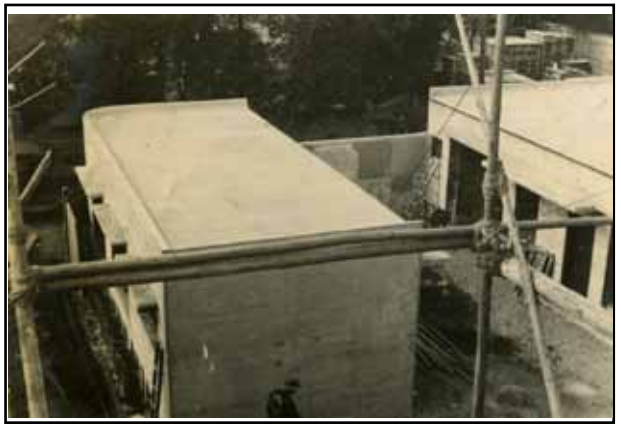


Main building

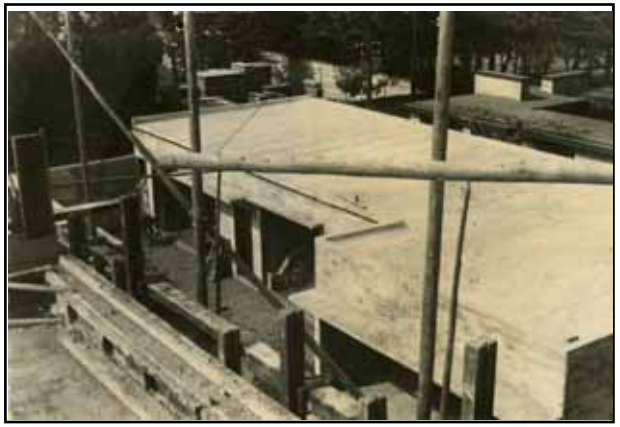
North wing

North wing

North wing



Annex



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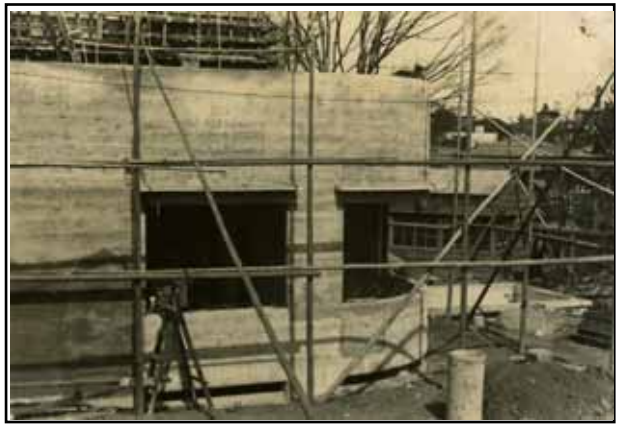
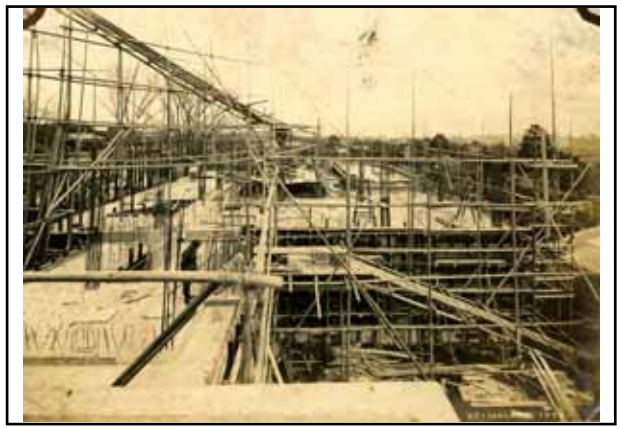


Lounge (south view)

North facade (north west view)

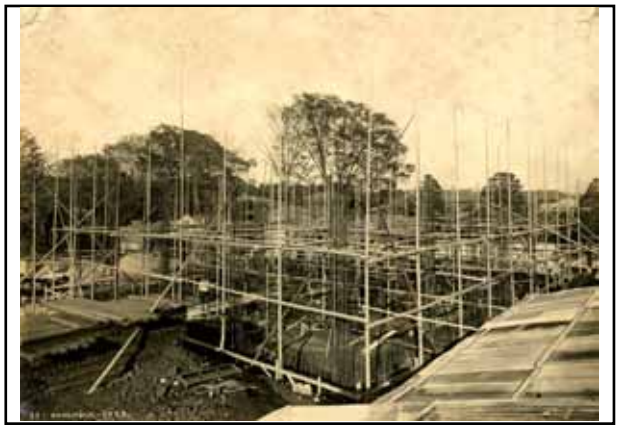
South facade

Japanese quarters and *kura* (left)

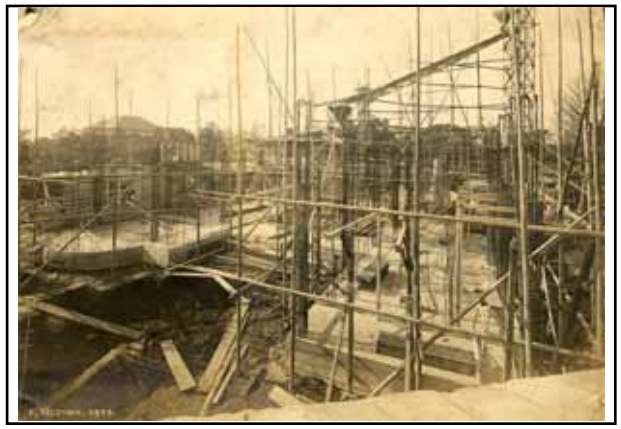


Building site

Building site with *kura*



Building site



Building site

CLIENT/HOUSE: AKABOSHI Tetsuma
赤星 鉄馬

YEAR: 1933-35 / Shōwa 8-10

CLIENT TYPE: Japanese

DESIGNER/DRAFTSMAN: Sugiyama Masanori 杉山雅則

COMMISSION No.: 1303

LOCATION: 4-26-21 Kichijoji-Honchō, Musushino City, Tokyo

TYPE: Main residence

STRUCTURE: Reinforced concrete

FLOOR AREA: approx. 151.24 tsubo (approx. 500 m^2)

CONDITION: Exstant

OFFICE NAME: Antonin Raymond, Architect, 708 Yaesu bldg., Marunouchi, Tokyo

ARCHITECTURAL DRAWINGS

Plans [X]: plot (1:200); BF, 1F, 2F, 1F (1:100); roof (1:100); framing (1:100)

Sections [X]: longitudinal (x2) (1:100); cross (x2) (1:100)

Elevations [X]: W, S, E, N (all 1:100) ; Kitchen

Fittings [ ]:

Details [ ]:

Drawings date: January 30th, 1934; February 16th, 1934 (all except kitchen elevations)

Drawings sources: Raymond Architectural Design office, Tokyo; Antonin Raymond's documents, courtesy of Kitazawa Koichi (北澤興一), Karuizawa.

PHOTOS [X]: 30: exterior; interior; details

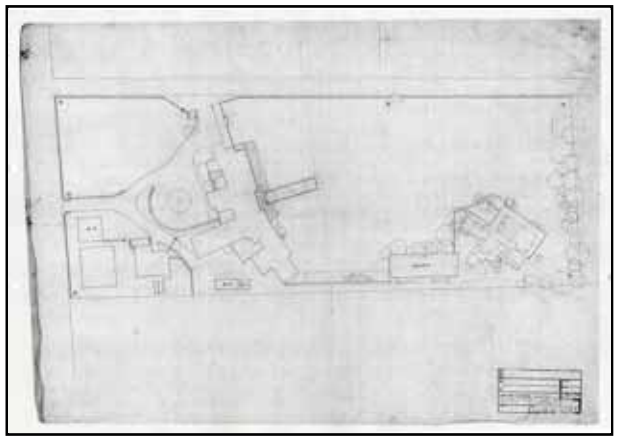
Photo sources: Antonin Raymond's documents, courtesy of Kitazawa Koichi (北澤興一), Karuizawa; Antonin reimondo, genzai nihon kenchiku zenshū ichi (アントニン･レイモンド, 現代日本建築全集一, 1971); Raymond A., An Autobiography, 1973; Helfrich Kurt G. F., Whitaker W. (ed.) Crafting a Modern World: The Architecture and Design of Antonin and Noémi Raymond, 2006.

PUBLICATIONS

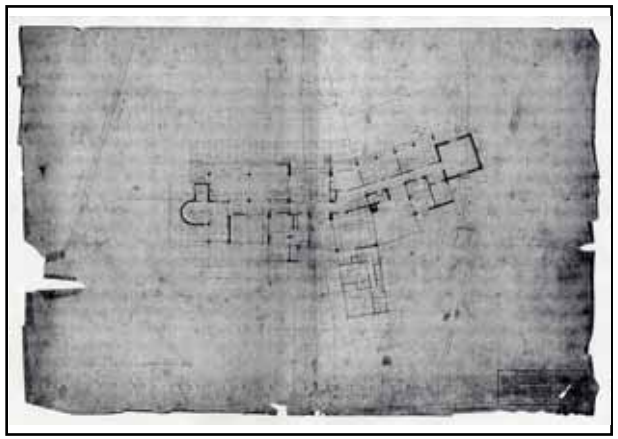
Shinkenchiku, vol. 11, 1935, pp. 161-168; Raymond A., An Autobiography, Rutland, Vt.: Charles E. Tuttle, 1973, p. 77; Japanese: 自伝アントニン･レーモンド, 東京: 三一書房, 1970, p. 125; Antonin reimondo, gendai nihon kenchiku zenshū ichi (アントニン･レイモンド, 現代日本建築全集一, 東京:三一書房, 1971, pp. 114-117; The Japan Architect, vol. 33, spring 1999, pp. 56-57; Helfrich Kurt G. F., Whitaker W. (ed.) Crafting a Modern World: The Architecture and Design of Antonin and Noémi Raymond, New York: Princeton Architectural Press, 2006, pp. 144-149.

NOTES

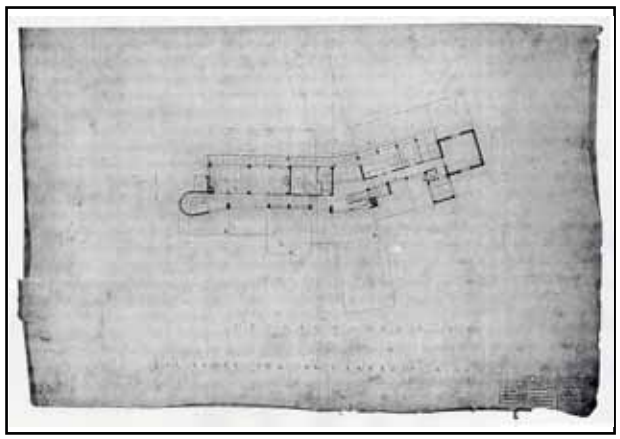
Tetsuma Akaboshi introduced black bass to Japan. He was born to a poor family in Meiji 15, on the 11th of January. His father later became rich. At 18, after graduating from high school he went to College and University in America (Laurence College and Pennsylvania University where he graduated. He came back to Japan in Meiji 43 and got married, at 27. He became the president of Taisho Bank in Tokyo and also ran stock farms in Korea.



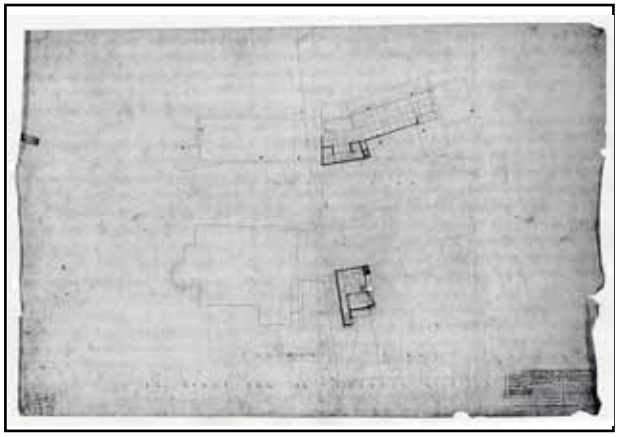
Plot plan



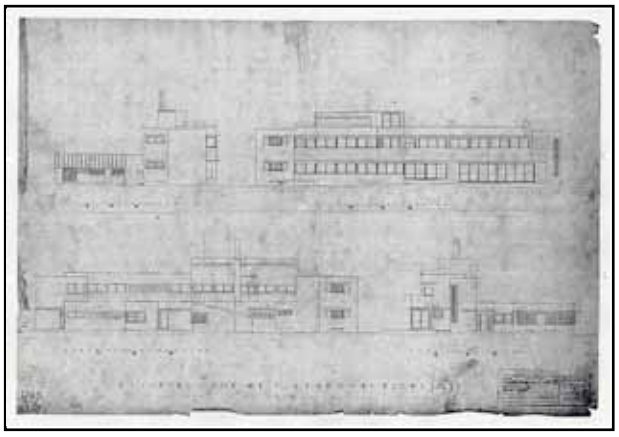
1F plan



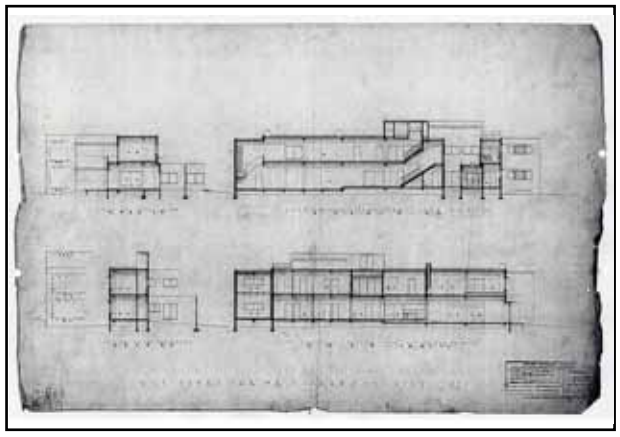
2F plan



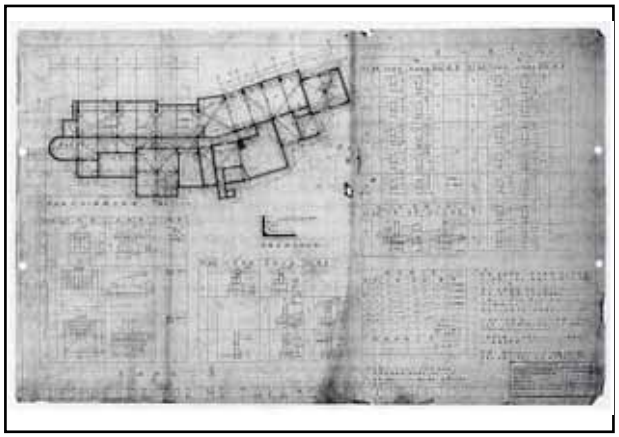
Basement and roof plans



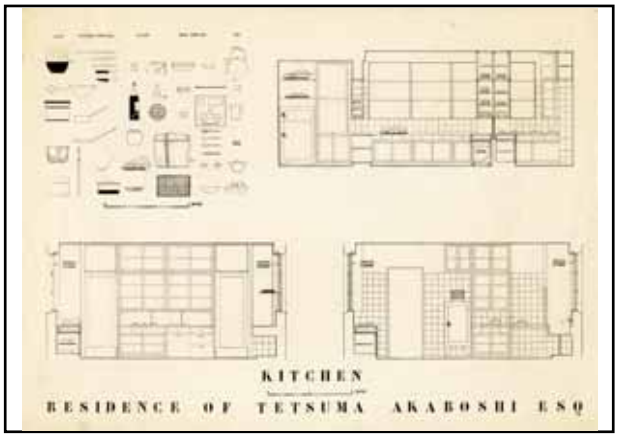
Elevations: west, south, north and east



Sections: cross and longitudinal



Typical frame plan



Kitchen elevations and ustensils

Approach with entrance gate (east)

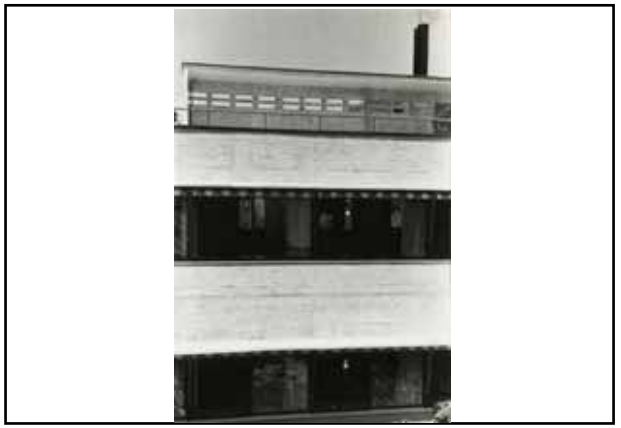
South facade with garden

South facade (south-east view)

South facade (south-west view)

Sun blinds (south)

windows (south)



Windows

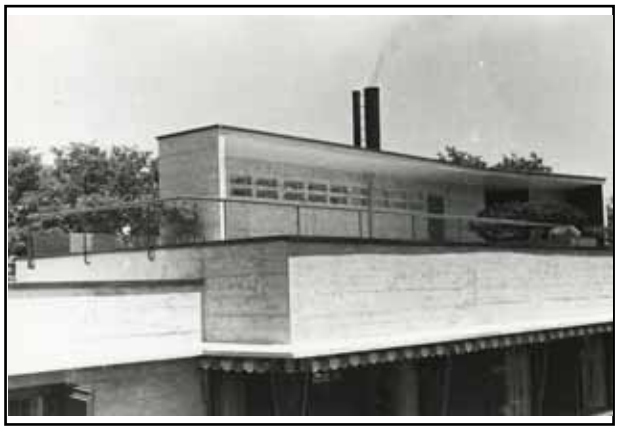
Windows and balcony

North facade with entrance proch on the left

Staircase (east facade)

Entrance (east view)

North facade details



Roof garden (south)

Roof garden (south)

Living room with folding screens opened (1F)

Living room with folding screens closed (1F)

Living room fireplace (1F)

Sliding doors in Japanese room with floor heating grid on the left (1F)

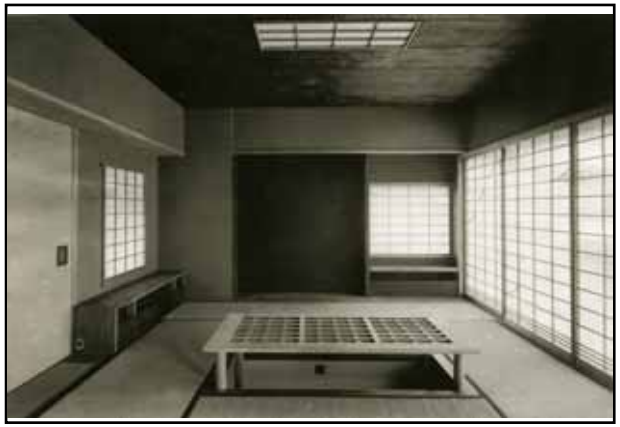
Sliding doors in Japanese room (1F)

Japanesse room cupboards (1F)

Madam's bedroom with adjacent Japanese room in the background (1F)

Children's bedroom with separating sliding doors (1F)

Staircase (1F)



Japanese room with *horigotatsu* (sunken table, 2F)

Study (2F)

Children's bedrrom with separating folding screens (2F)

CLIENT/HOUSE: FUKUI Kikusaburō
福井 菊三郎

YEAR: 1934-1936 / Shōwa 9-11

CLIENT TYPE: Japanese

DESIGNER/DRAFTSMAN:

COMMISSION No.: 1308

LOCATION: Atami, Shizuoka Prefecture

TYPE: Main residence

STRUCTURE: Reinforced concrete

FLOOR AREA:

CONDITION: Demolished

OFFICE NAME: Antonin Raymond, Architect, 708 Yaesu bldg., Marunouchi, Tokyo / Antonin Raymond Architect A.I.A., 7th floor, seisho-kwan 2 4-chome, Ginza, Tokyo

ARCHITECTURAL DRAWINGS

Plans: X
BF
1F
2F
3F
roof

Sections:

Elevations:

Fittings:

Details:

Drawings date:

Drawings sources: Gerard K., Helfrich F., Whitaker W. (ed.) Crafting a Modern World: The Architecture and Design of Antonin and Noémi Raymond, 2006.

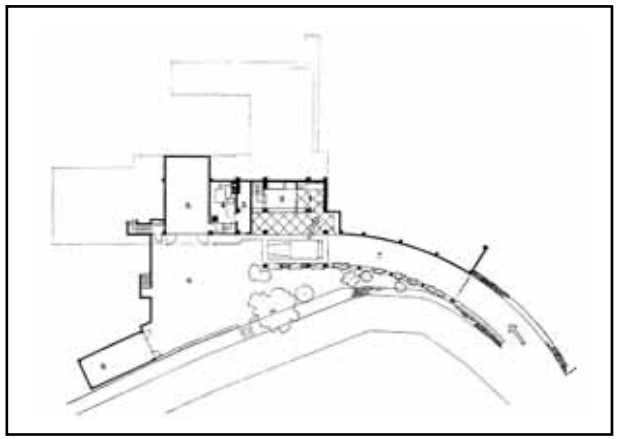
PHOTOS: X — 6: exterior; interior

Photo sources: Raymond A., An Autobiography, 1973; Helfrich Kurt G. F., Whitaker W. (ed.) Crafting a Modern World: The Architecture and Design of Antonin and Noémi Raymond, 2006.

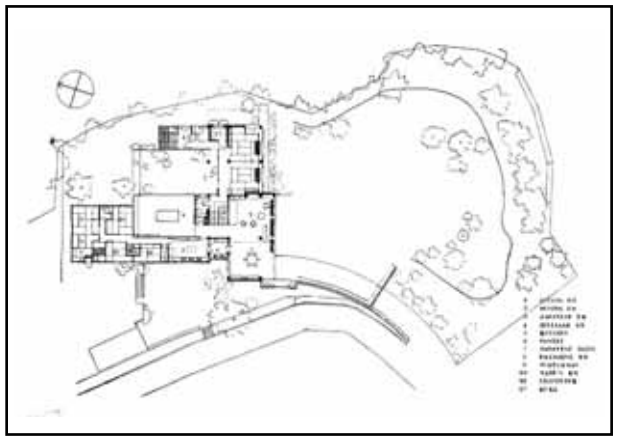
PUBLICATIONS

Raymond A., An Autobiography, Rutland, Vt.: Charles E. Tuttle, 1973, p. 137; Japanese: 自伝アントニン・レーモンド, 東京: 三一書房, 1970, p. 124; Helfrich Kurt G. F., Whitaker W. (ed.) Crafting a Modern World: The Architecture and Design of Antonin and Noémi Raymond, New York: Princeton Architectural Press, 2006, pp. 150-151.

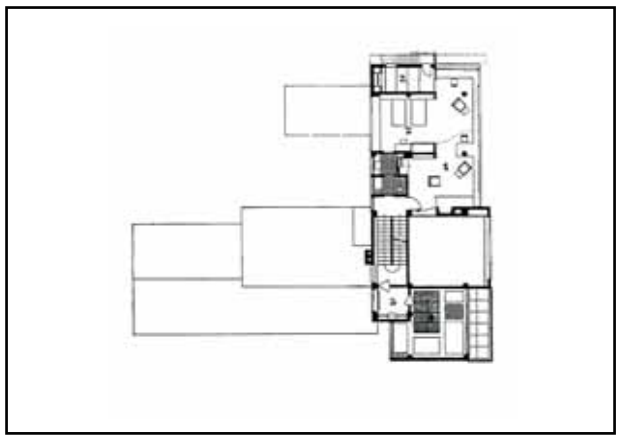
NOTES



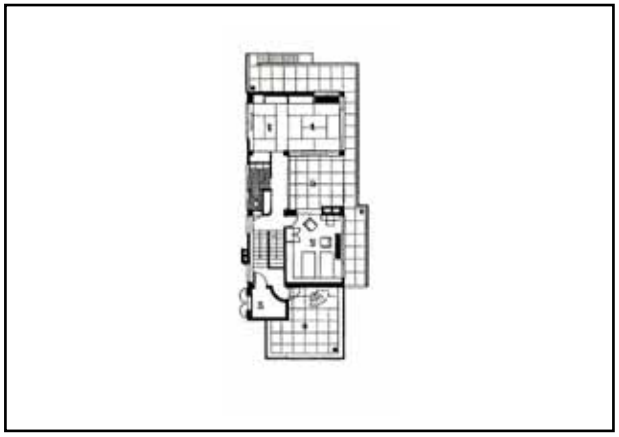
1F plan



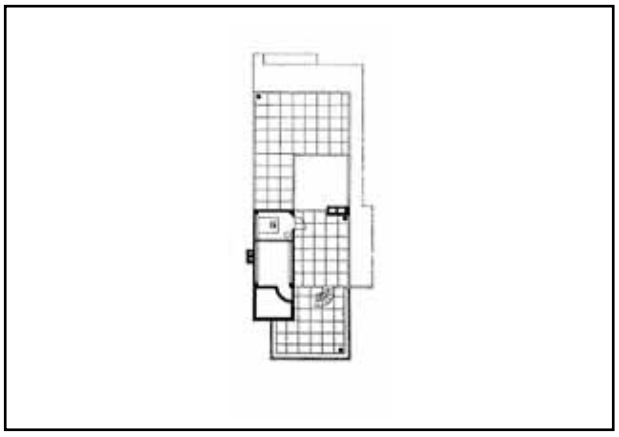
2F plan



3F plan



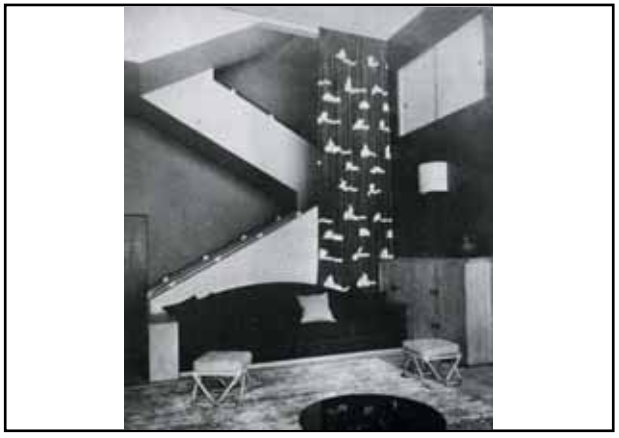
4F plan



Roof

South facade

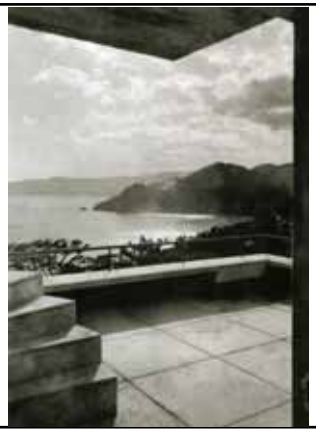
South facade



Staircase seen from living room (1F)

Living room and dining room, curtains drawn in front of the straicase on the right (1F)

Bathroom (2F)



Roof garden (3F)

CLIENT/HOUSE: KELLER A. O.
A. O. ケラー

YEAR: 1936-1937 / Shōwa 11-12

CLIENT TYPE: Western

DESIGNER/DRAFTSMAN:

COMMISSION No.: 1361

LOCATION: Ikegami, Ōta-ku, Tokyo

TYPE: Main residence

STRUCTURE: Concrete, Wood

FLOOR AREA: approx. 99.16 *tsubo* (approx. 327.82 m^2)

CONDITION:

OFFICE NAME: Antonin Raymond Architect A.I.A., 7th floor, seisho-kwan 2 4-chome, Ginza, Tokyo

ARCHITECTURAL DRAWINGS

Plans [X]: BF, 1F, 2F (1:50)
kitchen and pantry (1:20)
bathroom (1:20)
framing (1:100)
foundation (1:100)

Sections [X]: longitudinal (x2) (1:100)
cross (x 2) (1:100 + 1:20)
staircase (1:20)
bathroom (1:20)

Elevations [X]: E, N, W, S (all 1:100)

Fittings [X]: living room (1:50); reception room (1:50); kitchen and pantry (1:50)

Details [X]: structural drawings (1:50)

Drawings date: June 16th, July 29th, August 14th (all except cross section 4)

Drawings sources: Raymond Architectural Design Office

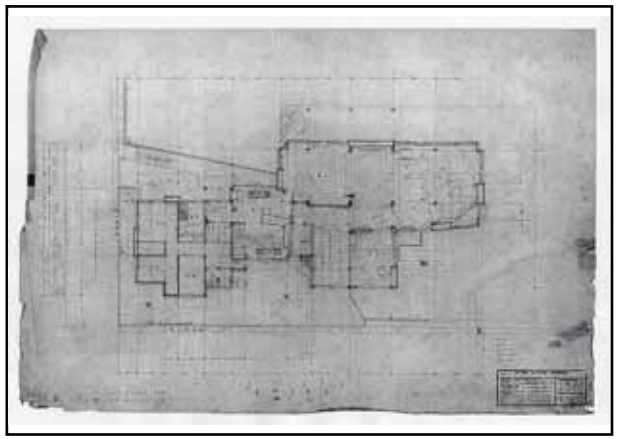
PHOTOS [X]: 31: interior; exterior

Photo sources: Antonin Raymond's documents, courtesy of Kitazawa Koichi (北澤興一), Karuizawa; Helfrich Kurt G. F., Whitaker W. (ed.) Crafting a Modern World: The Architecture and Design of Antonin and Noémi Raymond, 2006.

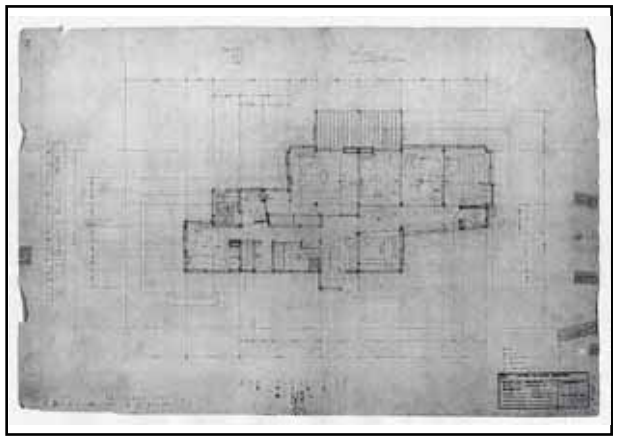
PUBLICATIONS

Shinkenchiku, vol. 14, 1938, pp. 114-123; Jūtaku, vo. 23, Shōwa 13 (1938), pp. 90-94; Kenchiku, April 1962, pp. 33; Helfrich Kurt G. F., Whitaker W. (ed.) Crafting a Modern World: The Architecture and Design of Antonin and Noémi Raymond, New York: Princeton Architectural Press, 2006, p. 169.

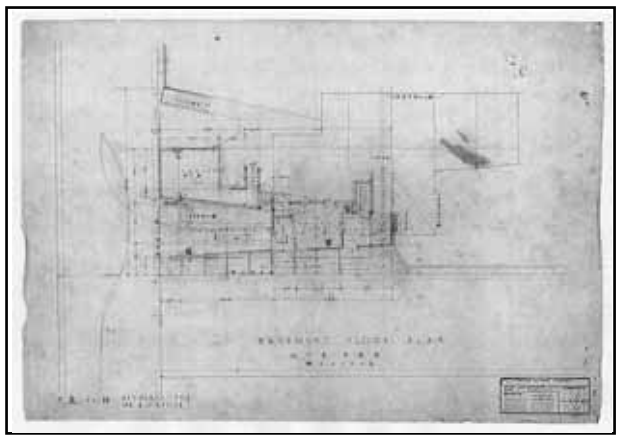
NOTES



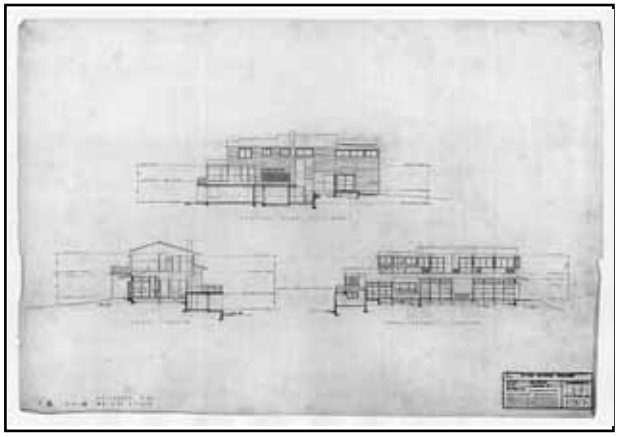
1F plan (1:100)



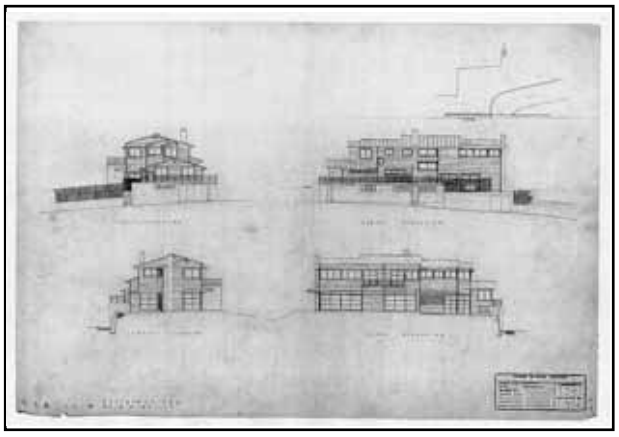
2F plan (1:100)



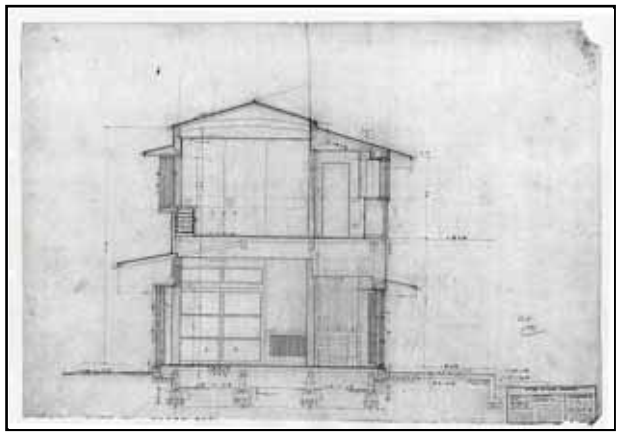
Basement plan (1:100)



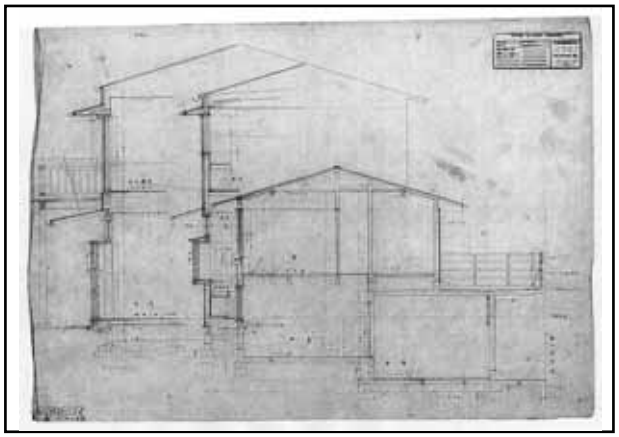
Sections: longitudinal and cross (1:100)



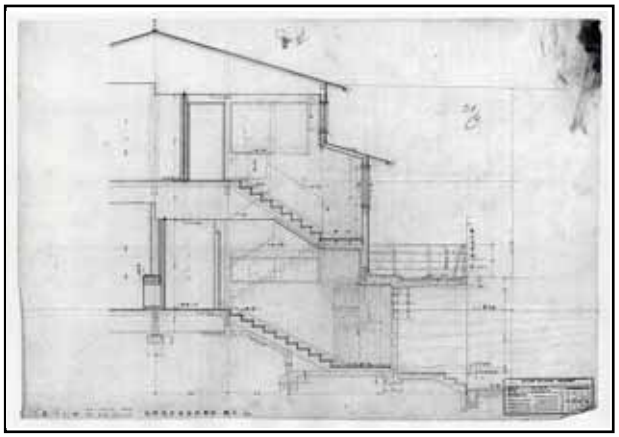
Elevations: east, north, west and south (1:100)



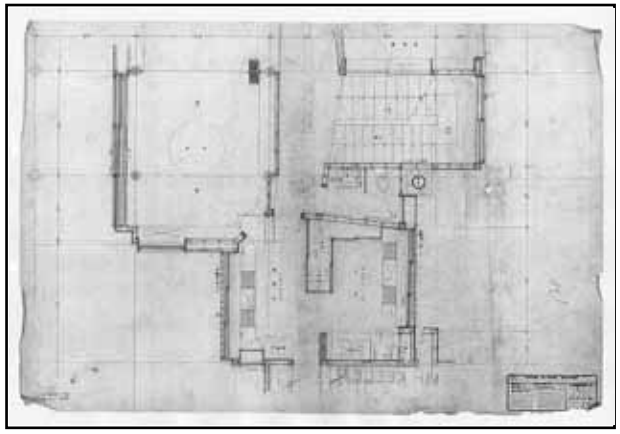
Cross section 1 (1:20)



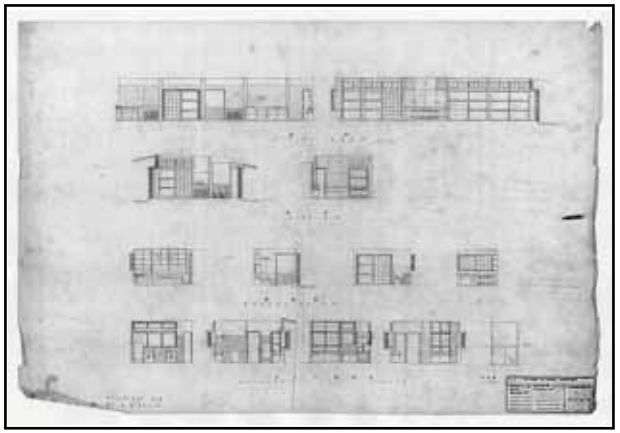
Cross section 2 (1:20)



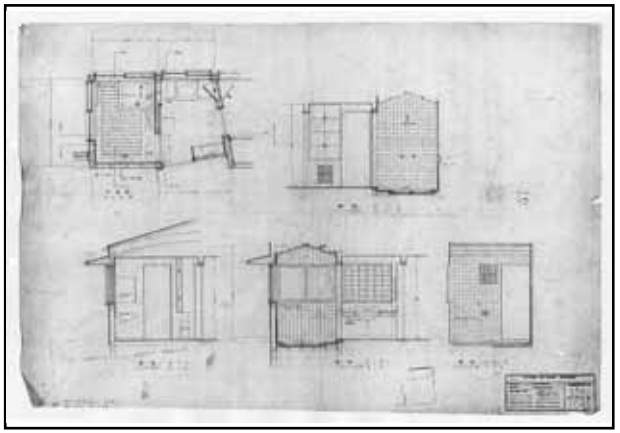
Cross section 3 (1:20)



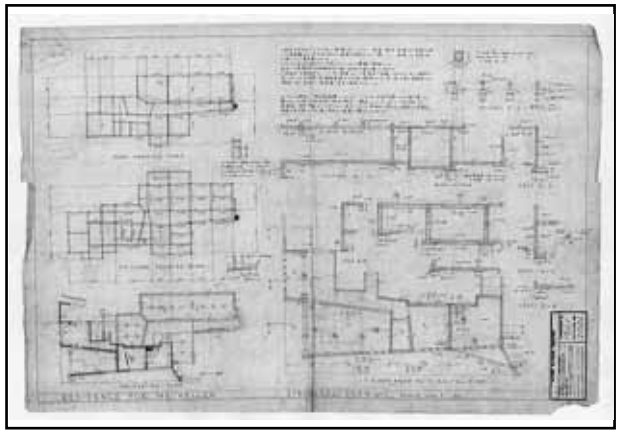
Detail plan (1:20)



Interior elevations: living room, reception room and kitchen-pantry (1:50)



Bathroom interior elevations and plan (1:50)



Framing plans: roof, 1F and 2F (1:100); Foundation plan (1:50)

Cross section 4

North-east view, with entrance to garage on east side

East facade

East facade

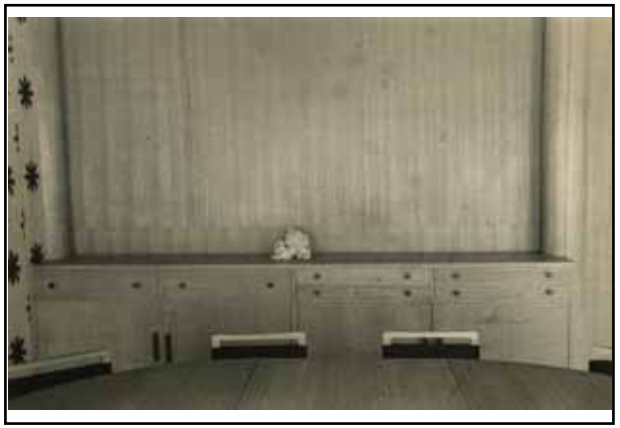
South facade with garden

Living room (1F)

Dining room (1F)

View of the living room from the dining room (1F)

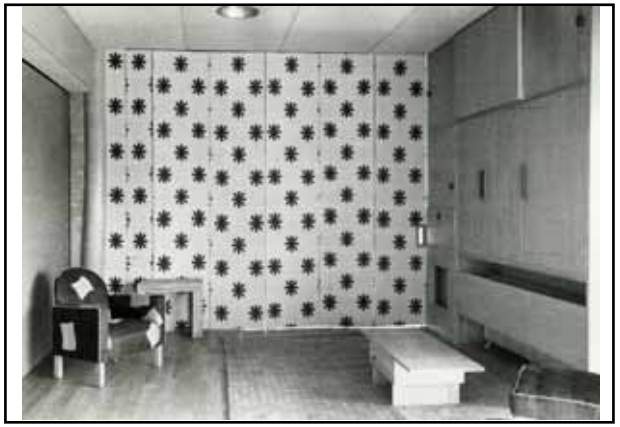
Side board in dining room (1F)



Side board in dining room (1F)

Ceiling and pillar (1F)

Dining room window (1F)



Living room with folding screen separting dining room (1F),
designed by N. Raymond

Living room fireplace (1F)

Bedroom closet (2F)

Bookshelf (2F)

Bedroom (2F)

Bedroom (2F)

Bedrooms (2F)

Bedrooms seen from piano room (2F)

Bedroom (2F)

Bedroom windows with *shoji* (paper screens, 2F)

Bedroom (2F)

Bedroom (2F)

Staircase

Staircase

WIndow (2F)

Eave (2F)

CLIENT/HOUSE: OKA Masakazu
岡 マサカズ

YEAR: 1936-1937 / Shōwa 11-12

CLIENT TYPE: Japanese

DESIGNER/DRAFTSMAN:

COMMISSION No.: 1360

LOCATION: Setagaya-ku, Tokyo

TYPE: Main residence

STRUCTURE: Wood

FLOOR AREA: approx. 74.375 *tsubo* (approx. 245.8 m^2)

CONDITION: Demolished

OFFICE NAME: Antonin Raymond Architect A.I.A., 7th floor, seisho-kwan 2 4-chome, Ginza, Tokyo

PUBLICATIONS

Shinkenchiku, vol. 13, 1937, pp. 382-386; Jūtaku, vol. 22, Shōwa 12 (1937), pp. 202-206.

ARCHITECTURAL DRAWINGS

Plans [X]
1F (1:50)
2F (1:100)
roof (1:100)
framing (1:100)

Sections [X]
staircase (1:20)
cross (1:20)

Elevations [X] N, W, S, E (all 1:100)

Fittings [ ]

Details [ ]

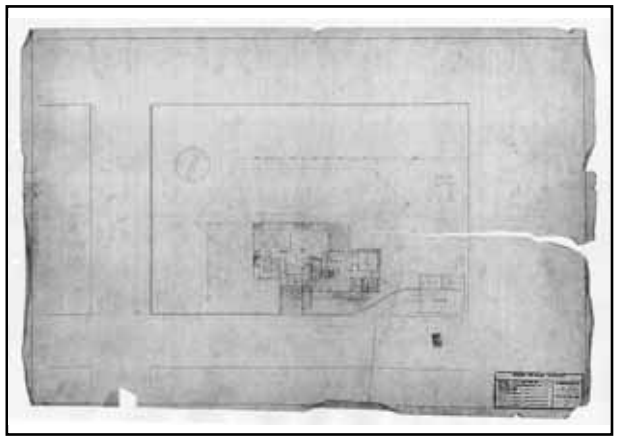
Drawings date: November 12th-13th, 1936.

Drawings sources: Raymond Architectural Design office, Tokyo.

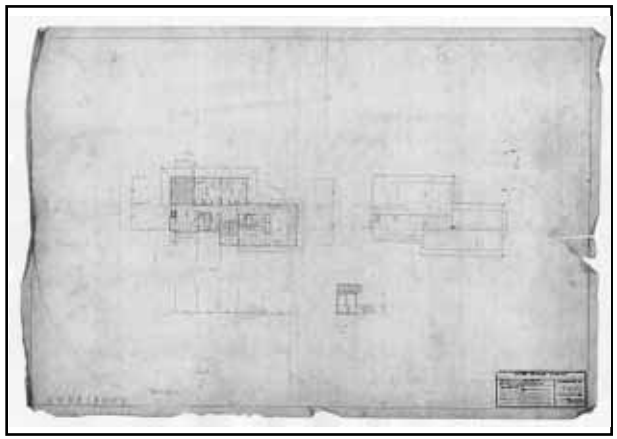
PHOTOS [X] 10: interior; exterior

Photo sources: Antonin Raymond's documents, courtesy of Kitazawa Koichi (北澤興一), Karuizawa; Jūtaku, vol. 22, shōwa 12 (1937).

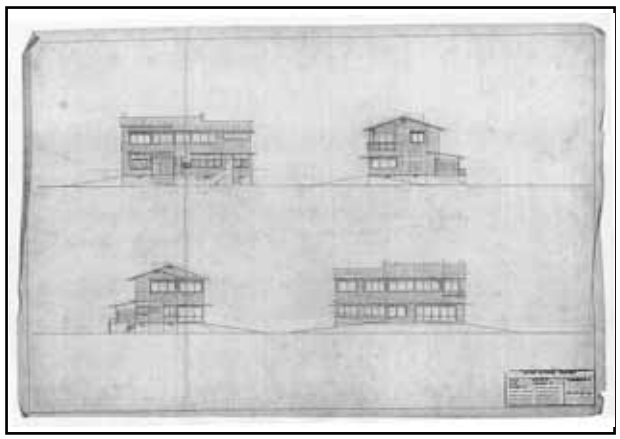
NOTES



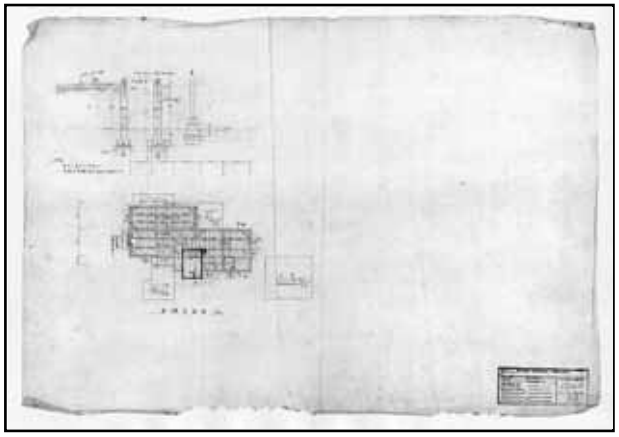
1F plan (1:100)



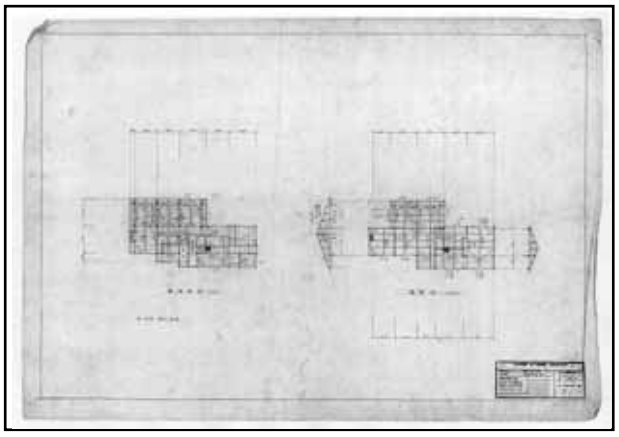
2F and roof plans (1:100)



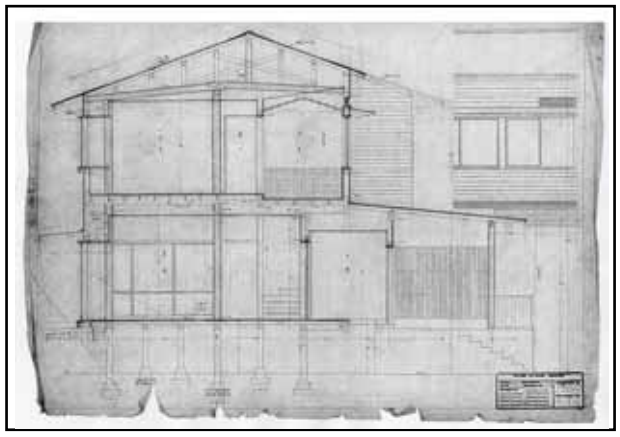
Elevations: north, east, west, south (1:100)



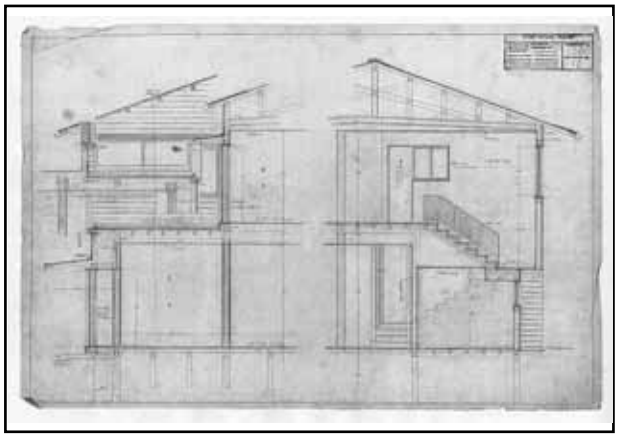
Basic framing plan, foundation details (1:100)



Typical floor frame, roof frame plan (1:100)



Cross section (1:20)



Cross section (1:20)

South facade with garden

Sout- east view

south-west view

Entrance porch (north)

Living room (left) and dinig room (right) (1F)

Living room (foreground) and dining room (background), staircase on the fare right (1F)

Staircase seen from dining room (1F)

Living room with folding screens on the left (1F)

Bedroom (2F)

Bedroom (2F)

CLIENT/HOUSE: OKA Masakazu
岡 マサカズ

YEAR: 1934-1935 / Shōwa 9-10
CLIENT TYPE: Japanese

DESIGNER/DRAFTSMAN:
COMMISSION No.: 1317

LOCATION: Karuizawa, Nagano Prefecture
TYPE: Summer house

STRUCTURE: Wood
FLOOR AREA:
CONDITION: Exstant, altered

OFFICE NAME: Antonin Raymond, Architect, 708 Yaesu bldg., Marunouchi, Tokyo / Antonin Raymond Architect A.I.A., 7th floor, seisho-kwan 2 4-chome, Ginza, Tokyo

PUBLICATIONS

Helfrich Kurt G. F., Whitaker W. (ed.) Crafting a Modern World: The Architecture and Design of Antonin and Noémi Raymond, New York: Princeton Architectural Press, 2006, p. 161.

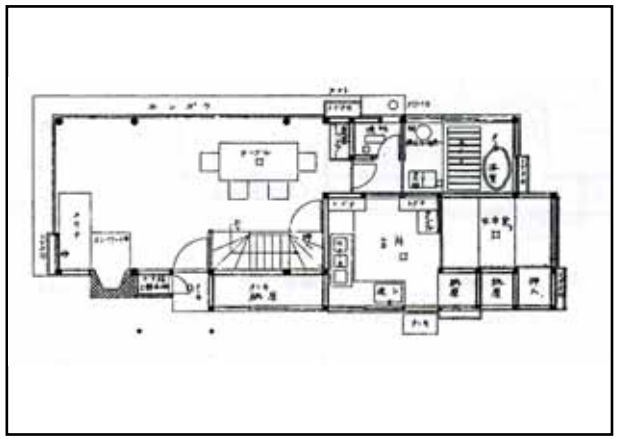
ARCHITECTURAL DRAWINGS

Plans [X]: 1F, 2F
Sections [X]: longitudinal, cross
Elevations [X]: N, S, E, W
Fittings [ ]:
Details [ ]:
Drawings date:
Drawings sources: Antonin Raymond's documents, courtesy of Kitazawa Koichi (北澤興一), Karuizawa

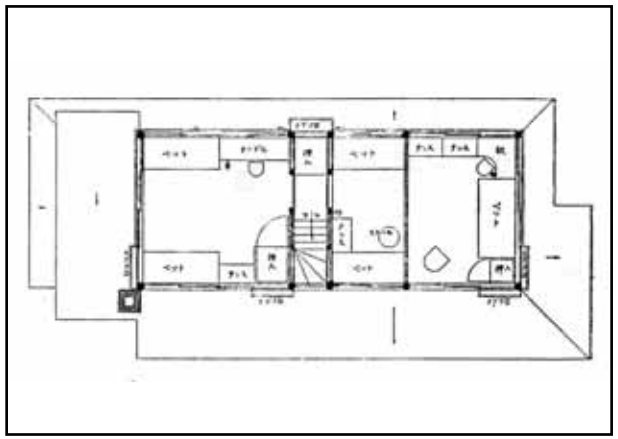
PHOTOS [X]: 12: elevations; sections; plans (original and present condition)

Photo sources: Antonin Raymond's documents, courtesy of Kitazawa Koichi (北澤興一), Karuizawa; FIeld trip photographies by Y. Gloaguen, July 2005; Helfrich Kurt G. F., Whitaker W. (ed.) Crafting a Modern World: The Architecture and Design of Antonin and Noémi Raymond, 2006; Present condition photos by Y. Gloaguen, July 2005.

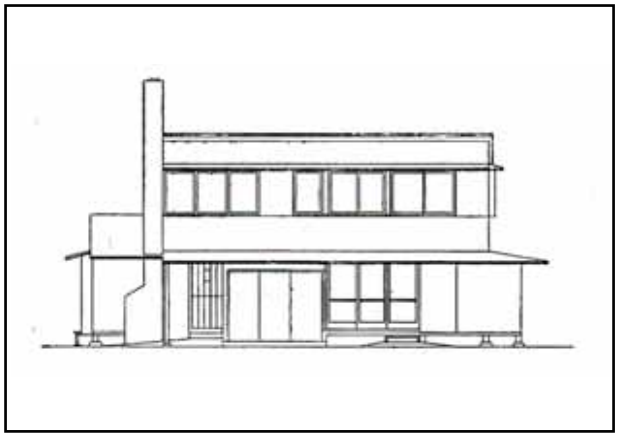
NOTES



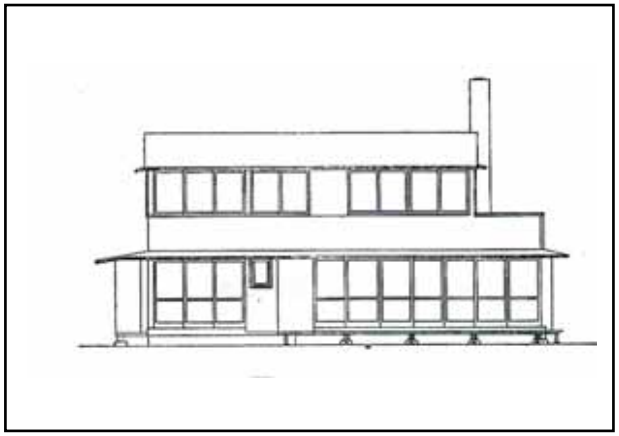
1F plan



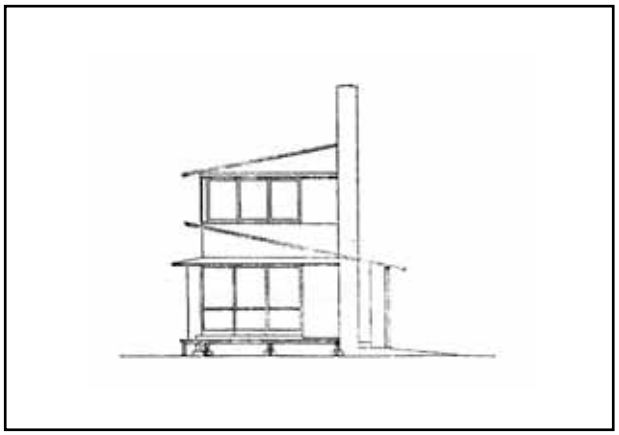
2F plan



North elevation

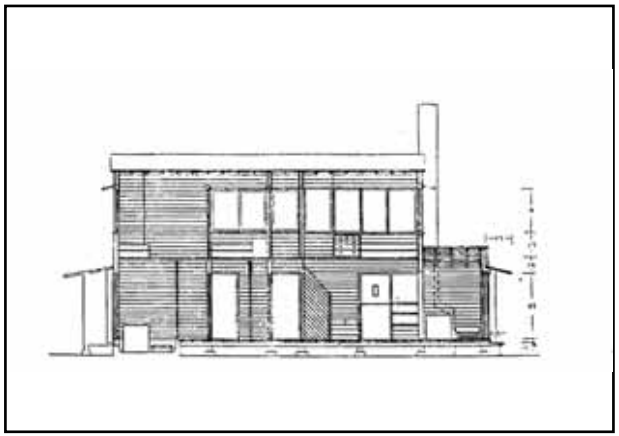


South elevation



East elevation

West elevation



Longitudinal section

Cross section

Rear facade (south)

West facade

Living room (1F)

CLIENT/HOUSE: HAGIWARA Kōshaku
萩原 公爵

YEAR: 1924-1925 / Taisho 13-14

CLIENT TYPE: Japanese

DESIGNER/DRAFTSMAN:

COMMISSION No.: 1177

LOCATION: Tokyo

TYPE: Main residence

STRUCTURE:

FLOOR AREA: approx. 69.75 tsubo (approx. 230.5 m^2)

CONDITION: Destroyed

OFFICE NAME: American Architectural and Engineering Company, 21 Mitsubishi bldg., Marunouchi, Tokyo

PUBLICATIONS

ARCHITECTURAL DRAWINGS

Plans	X	1F (1:50) 2F (1:50) framing: 1F, 2F, roof (all 1:50)	Sections X	Longitudinal (x2) (1:50) cross (1:50) detail of dining room, servant quarter and bedroom (all 1:20)
Elevations	X	NW, NE, S, SE (all 1:50)		
Fittings				
Details	X	interior footing (1:20)		

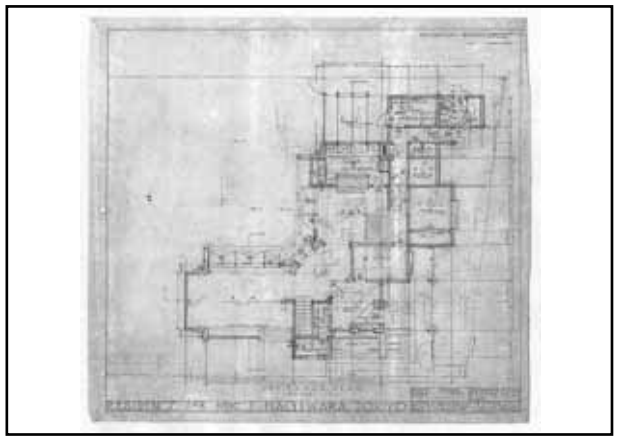
Drawings date: Undated

Drawings sources: Raymond Architectural Design office, Tokyo.

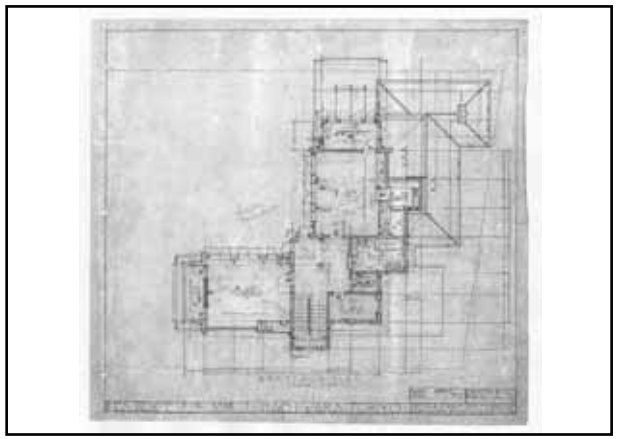
PHOTOS X: 9: interior, exterior, details

Photo sources: Antonin Raymond's documents, courtesy of Kitazawa Koichi (北澤興一), Karuizawa.

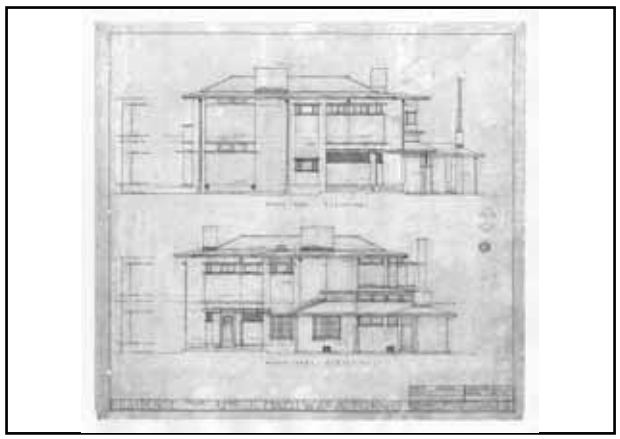
NOTES



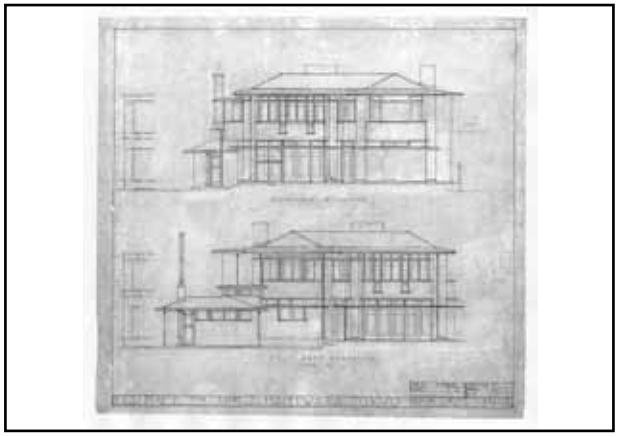
1F plan (1:50)



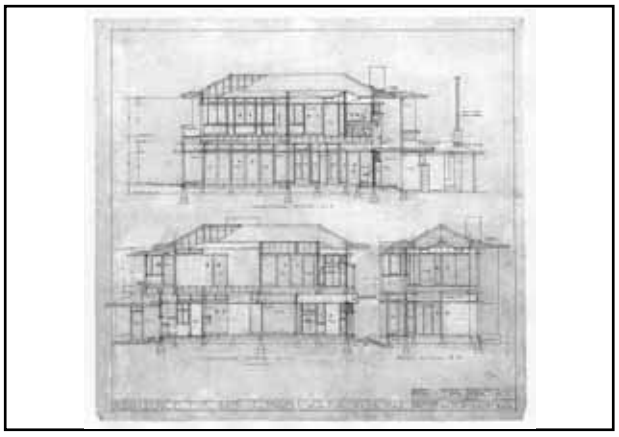
2F plan (1:50)



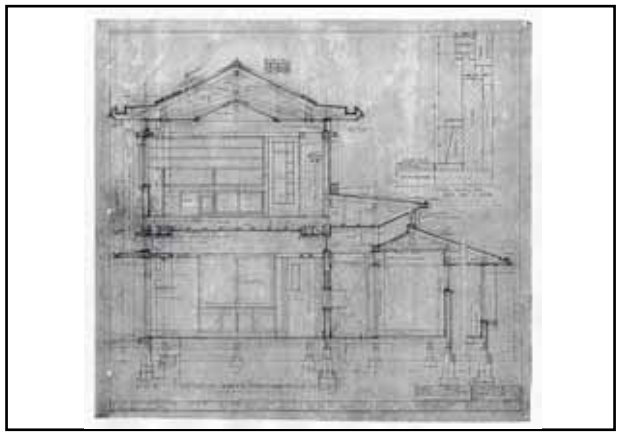
Elevations: north-east and north-west (1:50)



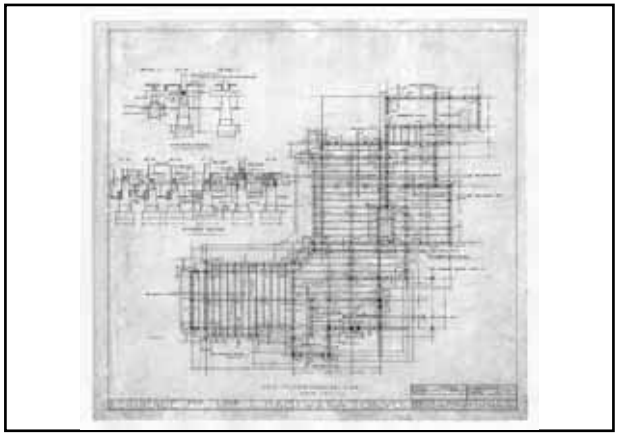
Elevations: south-east and south-west (1:50)



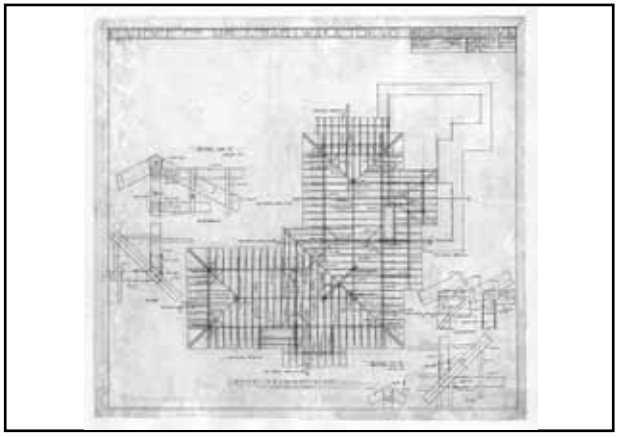
Sections: longitudinal and cross (1:50)



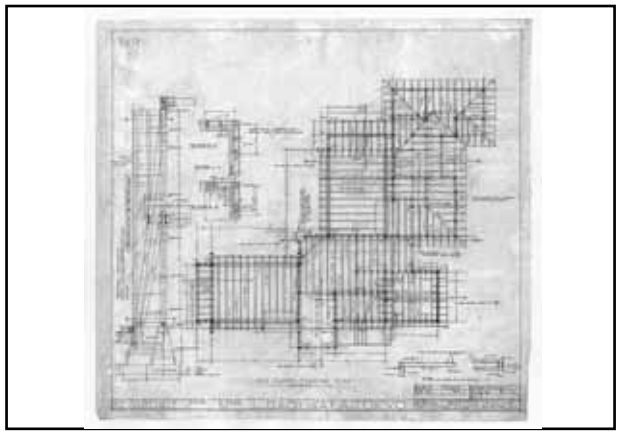
Section on detail of dining room, servant quarter and bedroom (1:20)



1F framing plan (1:50); Foundation details (footings) (1:20)



2F framing plan (1:50); Details(1:10)



Roof framing plan (1:50); Details (1:20)

Front facade with corner entrance (south-east)

Street approach with entrance gate (north-west)

entrance hall (1F)

Living room fireplace (1F)

Living room (1F)

Living room seen from entrance hall (1F)

Living room (1F)

Dining room, entrance hall and staircase in the background (1F)

desk