

A Study on Chinese Contemporary Architects' Thoughts on Yuanlin in Their Design Theories

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1. Introduction
1.1 Background and Aim

Yuanlin, Chinese traditional garden style, is known for its unique spatial experience and architectural elements. Since 1950s, architects and researchers have studied Yuanlin from the view of spatial composition, besides atmosphere. On condition of that, many architects have been inspired by various aspects of Yuanlin and adapted them to realize their own ideas. This study analyzes Chinese architects' design theories referring to Yuanlin from the articles in architectural magazines in China in order to figure out the connection between traditional architectural language and contemporary design practice. 1.2 Research Methodology Selected texts are analyzed to extract three parts. First it's Focus Point of Yuanlin, which is the aspect of Yuanlin that architects pay attention to. Then it's Representation Part, which is the part of work that architects apply Yuanlin to. Last one is Design Approach, which shows the way how architects apply the focus points to works. As the example in Tab.1 shows, the architect focuses on 'half house and half building space type of Jiangnan Yuanlin'. When applying this point to work, the architect translate it into the whole layout of the building. Therefore we can get the results in the analysis column.

2. Focus Point of Yuanlin

Based on KJ Method, the contents of Focus Point of Yuanlin are analyzed and illustrated in Fig.1. The mapping figures out the relationships between every terms and summarized the terms into four different aspects of Yuanlin: [I. Concept], [II. Element], [III. Organization] and [IV. Spatial Character]. [I. Concept] consists the methodology and ideas of Yuanlin. [II. Element] is composed of the physical entities. [III. Organization] includes [III-1. Spatial Composition] and [III-2. Layout], which is the way to build Yuanlin. [IV. Spatial Character] is the mental feeling in Yuanlin, such as atmosphere and experience.

Based on the frequency numbers, we can find that [II. Element] and [III. Organization] both account for 35%. In the group of [II. Element], 'corridor' in [II-1. Architectural Element] and 'water' in [II-4. Scenery Element] are most often mentioned. In all of the groups, [III-1. Spatial Composition] and [III-2. Layout] are discussed the most frequently. In [IV. Spatial Character], the term of 'changing scenery with steps' is the most one to describe the experience in Yuanlin. To sum up, [II. Element] and [III. Organization] are believe as the key to realize the quality of Yuanlin.

3. Representation in Work


Architects' thoughts on Yuanlin are embodied in their works. Representation Part and Design Approach are analyzed in Chapter.3.

3.1 Representation Part

As shown in Tab.2, Representation Part is divided into two groups: {Outside} and {Inside}. {Outside} is about the exterior design while {Inside} is interior design. The group of {Outside} is divided into {Whole} and {Parts}. {Parts} concludes elements such as roof, wall and window. The group of {Inside} is divided into {Whole} and {Parts}. {Parts} concludes elements such as specific space, furnishings and wall. Seeing from the frequency numbers, there is no clear difference between {Outside} and {Inside} and architects pay the most attention to <Outside-Whole>.

3.2 Design Approach

As shown in Tab.3, Design Approach is summarized as 6 types: ((Space)), ((Layout)), ((Landscape)), ((Form)), ((Decoration)) and ((Material)). ((Space)) is related with plans. ((Layout)) is the relationship with sites. ((Landscape)) is about scenery creation. ((Form)) is the operations about outline and shape. ((Decoration)) is using specific ornament. ((Material)) is about building material such as painting. Among them, ((Space)) is the most used one, making up 37%. The second one is ((Layout)), making up 26%, which is more than the total numbers of ((Form)), ((Decoration)) and ((Material)).

Journal No.	Title of Work	Function	Location	Architect	Reference
[Architectural Journal] 2013.06	Shanghai Cultural Industrial Park	Campus	Shanghai	ZHANG Bin	Traditional Yuanlin
<div><div></div><div><p>设计借鉴了江南园林的“半宅半园”的空间类型，来组织所有的办公空间，形成了秩序与自在并存的空间氛围。建筑整体上呈现为中、东、西三路，每路三到四进的大小不一的十个连院；这些院子分为“宅”（以建筑为主）和“园”（以庭园为主）两种类型，错落布局，疏密有度。</p><p>The design refers to the "half house and half garden" space type of Jiangnan Yuanlin to organize all the office spaces, forming the atmosphere where order and freedom coexist. The buildings as a whole is presented as three roads in the middle, east and west, with ten courtyards of different sizes with three to four entrances in each road; they are divided into "houses" and "gardens", mainly two types. They are in staggered layout, and comfortable density.</p></div><div><p>2. Focus Point of Yuanlin</p><p>III-2. Layout</p><p>3.1 Representation Part</p><p>Outside - Whole</p><p>3.2 Design Approach</p><p>Layout</p></div></div>					

Tab.1 Example of Analysis

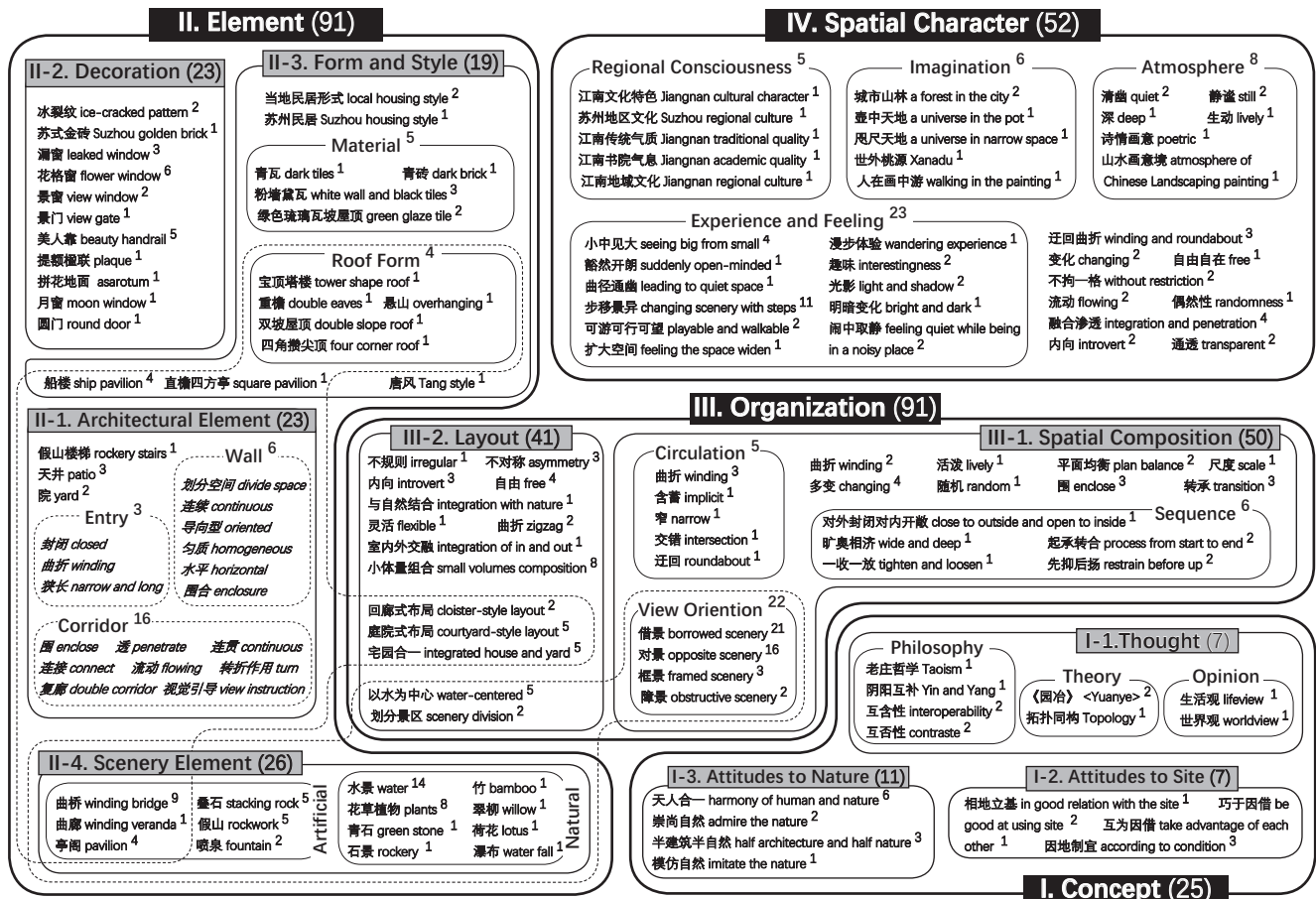
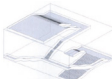







Fig.1 Focus Point of Yuanlin

I. Concept (25)		Design Approach (25)	
Whole (84)		Approach and Typical Image	Example Case
Outside (125)	Example: No.016-1 采用传统园林布局手法, 把大体量的建筑分成几组小体量的建筑群体, 采取不对称处理, 灵活的庭院式布局。 Referring to traditional Yuanlin layout techniques, the large-scale buildings are divided into several small volumes. It is in asymmetrical organization and flexible courtyard-style layout is adopted.	Space (97)  Circulations, winding space	No.006-2 Referring to the traditional methods of 'enclosing', 'opening', opposite scenery and borrowed scenery in Yuanlin, we combine spaces such as entrance halls, business halls, lounges, restaurants and corridors. They surround the inner courtyard and create a continuous and changing spatial sequence.
	Parts (41) -Roof (9) -Wall (20) -Window (7) -Part of Volume (5)	Layout (67)  Courtyard-style layout	No.024-1 The overall volumetric arrangement of Siming Villa adopts the traditional courtyard-style layout of Jiangnan Yuanlin architecture. According to different function, all buildings are designed from small to large, from low to high, combined with topography, into three courtyards.
	Whole (61) Example: No.016-1 几乎在任何一个活动与办公场所内都可以看到景观, 传统古典园林中的借景、对景、框景、现代景观中的线条、图案、色彩, 二者均统一于此。 The scenery can be seen everywhere in the office space. Yuanlin techniques such as borrowed scenery, opposite scenery and framed scenery, are combined with modern lines, patterns and colors.	Landscape (35)  Trees, lawn, bamboos and rockeries	No.087-2 Typical elements with the characteristics of Suzhou Yuanlin, such as falling water, trails, bamboo forests, ponds and rockery are used to create a dynamic and static combination, introverted and pleasant space, and provide tourists with a rest landscape space, coupled with the natural and harmonious water platform, so that the lake view can be seen completely.
	Parts (73) -Specific Space (62) Entry, yard and so on -Furnishing (7) Furniture and decoration -Wall (4)	Form (26)  Special form of roof, wall	No.011-1 The roof design uses different forms of roof combinations such as towers, double eaves, hanging mountains, and overturned cornices in Jiangnan Yuanlin architecture. The residential buildings are contrast in size and volume, and make changes in the directions to make the building complex richer in rhythm and hierarchy.
		Decoration (24)  Pattern of windows in Yuanlin	No.081-2 In the design of the library and public teaching buildings, the form of Chinese classical Yuanlin windows was adopted, and the pattern was abstracted and restored on the facade of the building at an appropriate scale, forming a form of window openings that are rich in rhythm and cultural interest.
Inside (134)		Material (10)  White walls, ambiguous material	No.013-1 In the exterior, white walls and gray tiles are mainly used, and some parts are decorated with simple and elegant colors. The contrast of colors is used to make the buildings more eye-catching and prominent in the shade of the flowers, trees, and mountains. It is richer in the traditional features of Chinese Yuanlin architecture art.

Tab.2 Representation Part

Tab.3 Design Approach

3.3 Representation Type

9 typical combinations of Representation Part and Design Approach are shown in the gap between Tab.2 and Tab.3: <A. Space × In-Whole>, <B. Layout × Out-Whole>, <C. Space × In-Parts>, <D. Landscape × Out-Whole>, <E. Form × Out-Parts>, <F. Landscape × In-Parts>, <G. Decoration × Out-Parts>, <H. Decoration × In-Parts>, <I. Material × Out-Parts>. The typical types account for 94% in whole cases. Among them, the most ones are Type A and Type B. Additionally, there are more cases related to {Whole} than {Parts}. It reflects architects' design philosophy: when referring to Yuanlin, they prefer to consider from a wider and broader view.

4. Translation from Yuanlin to Contemporary Work

The relations between Focus Point and Representation in Work are analyzed to figure out the connection between traditional architectural language and design practice.

4.1 Focus Point and Representation Type

Focus points of Yuanlin and typical representation types are combined in Fig.2 with 9 most popular examples. The result is concluded to four points as below.

(1) Among Focus Point, [[IV. Spatial Character]] is the only group which is related with all transformation types. Therefore it can be concluded that [[IV. Spatial Character]] is the most flexible characteristic, with which architects can develop rich and colorful results. The reason is that [[IV. Spatial Character]] is about architects' personal feeling and experience about Yuanlin, which varies according to their different background. Therefore, it's not uncommon that [[IV. Spatial Character]] is translated in various approaches.

(2) Among Representation Type, the group of B is related with 7 aspects of Focus Point, which is the most among all transformation types. Architects translate different aspects of Yuanlin in the way of <Layout × Out-Whole>.

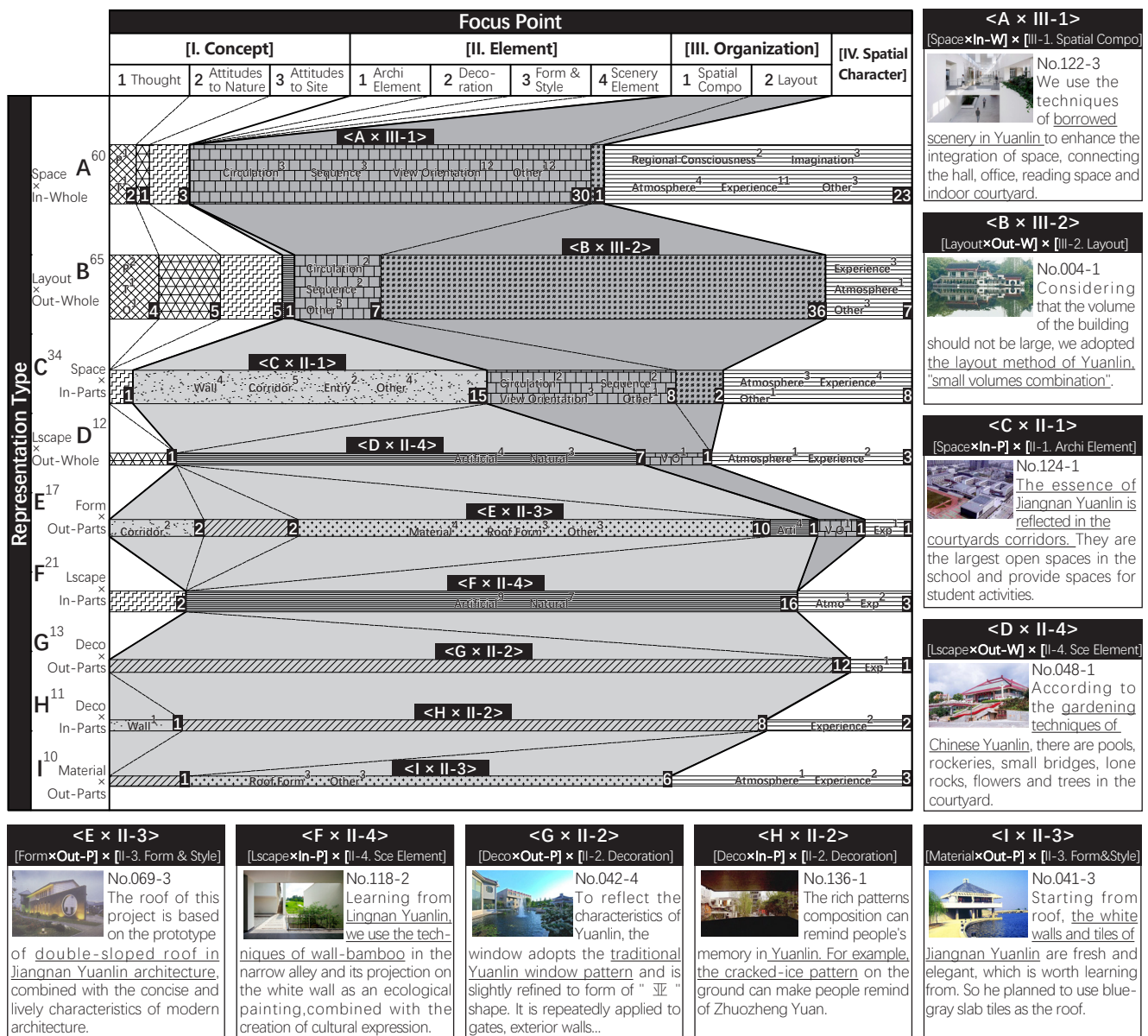


Fig.2 Focus Point and Realization Method

Therefore it can be concluded that in a project, the relationship with the site and the volume arrangement are the most direct and popular parts for architects to realize the unique quality of Yuanlin.

(3)As the two grey areas show, Type D~I show high tendency to relate with [[II. Element]] and they are representation of {Part} except for Type D. On the other hand, Type A and B show high tendency to relate with [[III. Organization]] and they are representation of {Whole}. Besides, the contents of both [[I. Concept]] and [[IV. Spatial Character]] are more transformed into {Whole}. It can be concluded that when referring to [[I. Concept]], [[III. Organization]] and [[IV. Spatial Character]], architects are considering from a marco perspective. However, when they refer to [[II. Element]], they prefer to take a micro and detailed view.

(4)Compared with the tendency in [Whole] and [Parts], there is no obvious difference between [Inside] and [Outside]. It's owing to the unique characteristic of Yuanlin that the inside and outside space are integrated and merged and they are not distinguished clearly. On codition of that, when architects take Yuanlin as reference, they won't focus on the boundary between inside and outside.

4.2.1 Chronological Analysis of 9 Most Popular Types

Fig.3 shows chronological change of the 9 most popular types. Three typical tendencies are pointed out.

Firstly, the ratio in each period is decreasing sharply, from 38/56 in 1980s to 28/80 in 2010s. It means architects' thoughts are growing diverse, leading to the diversity of transformation types. So the typical cases are no longer the most ones. Secondly, types such as <E × II-3> and <F × II-4> were popular in 1980s but decreased sharply. However, <C × II-1> was minority at first but increased a lot. It reflects the changing tendency of design approach. Thirdly, since 1980s <A × III-1> and <B × III-2> have always accounted for more than 1/3 among all cases. The stable tendency means that the space and layout is impossible to ignore when representing the quality of Yuanlin.

4.2.2 Chronological Analysis of Focus Point

Fig.4 shows chronological change of Focus Point. Three typical tendencies are pointed out.

Firstly, in 1980s the ratios of each group was extremely polarized but after that they are growing relatively average. It reflects the diversification of architects' thoughts on Yuanlin. Secondly, in 1980s, [[II. Element]] gained the most attention but decreased sharply. However, [[IV. Spatial Character]] was minority at first but increased a lot. It reflects that architects' focus is switching from physical aspects to abstract aspects. It can be foreseen that [[IV. Spatial Character]] will be the key to represent the quality of Yuanlin. Thirdly, since 1980s, the contents of [[III. Organization]] have always accounted for one third in each period. It corresponds to the mainstream that since 1950s, space has become one of the most important research topic of Yuanlin.

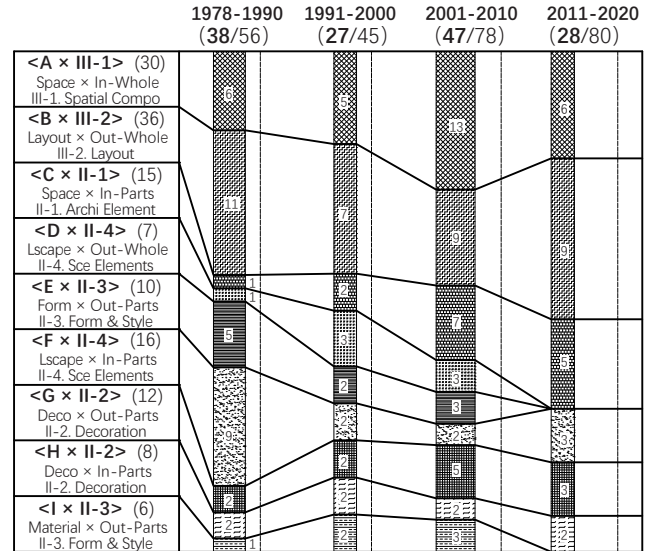


Fig.3 Chronological Analysis of 9 Most Popular Types

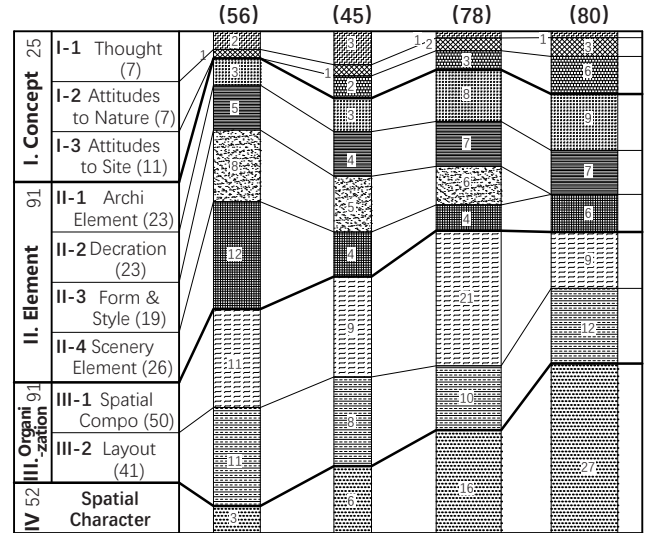


Fig.4 Chronological Analysis of Focus Point

5. Conclusion

This study takes Yuanlin as a research object to analyze how Chinese contemporary architects refer to traditional architecture and represent the quality in works. To sum up, architects' focus is switching from concrete aspects to personal cognitions. For example, architects first study on [Element] and [Organization] of Yuanlin, then they turn to [Spatial Character]. The tendency reflects that their thoughts are growing deeper and further. Secondly, ((Space)) as a design approach gains growing attention and will be a leading trend in the future, which also corresponds to the mainstream of modern architecture. Lastly, compared with the partial aspects, architects' are more interested in the overall appearance of projects. It reflects that architects' design philosophy is more from a broad perspective when referring to traditional image.

Notes:

1)The magazine of 'Architectural Journal', which is one of the most important academic journals in the field of Architecture in China, is selected as the source of research materials. It publishes projects and design descriptions. Articles are selected from the period of 1978 (when China started the reform and opening-up policy) to 2020. Totally 143 projects and 228 texts are selected.