

# A Study on the Tectonic Quality of Peter Zumthor's Works with a focus on materials, joint, break, structure and context

피터 Zumthor 건축에 나타난 구축성에 관한연구

- 재료, Joint와 Break, 구조, 장소를 중심으로 -

**Author** 김자영 Kim, Eunice Ja Young / 정희원, 고려대학교 공과대학 건축학과 조교수

**Abstract** The aim of this study is in emphasizing the importance of the use of material and the tectonic and their influence on the spatial quality by analyzing Peter Zumthor's projects as case studies. In the research, Zumthor's choice of material, construction method (detail and structure) and the relationship with the context were analyzed in order to illustrate Zumthor's approach in making a strong tie with the locality. Three of Zumthor's projects of different sizes and programs were chosen to heighten the sensitivity of Zumthor's unique working method for each project. Peter Zumthor's architecture is neither superficial nor visually complex. On the contrary, he aims to express through the use of material and construction method, a unique relationship with the physical context, social context and most importantly the actual experience of the space itself. This study aims to contribute towards increasing the awareness and the interest in the materiality and the tectonics which are the fundamentals in spatial experience and spatial identity.

**Keywords** 재료, 구축성, 피터 Zumthor  
Material, Tectonic, Peter Zumthor

## 1. Introduction

### 1.1. Research Background and Objectives

In the recent years, the main interest and the trend in the architectural design seems to have been in the more visual nature. This is further supported by the orientation towards more 'visual' impact of architecture. Many projects built in the recent years are visually striking, both attention drawing and seeking at the same time. However, there is a new awareness of architecture that is more than just the 'visual', but which deal with all five senses, sight, sound, smell, touch and even taste. It can be easily argued that the architectural experience is actually through those five senses. What is equally important in an architectural experience is also the tectonic - which discusses the physical properties and the make-up. The aim of this research is to heighten the importance of a perspective on architectural discourse

that is more than just the visual. This will be illustrated by analyzing the spatial impact of Peter Zumthor's works from the material and tectonic quality. Peter Zumthor's use of different material and choice of the construction method will be closely examined to make his unique method of relating the space with the locality and time more apparent.

### 1.2. Research Method and Scope

The main research method for this study was as follows: firstly a theoretical background research into 'tectonic' was carried out. The concept of tectonic was analyzed by cross examination of Kenneth Frampton and C. Norberg-Schulz. These two writers were selected in order to focus more closely to the concept of tectonic in the modern architecture period.

Secondly, on the basis of Kenneth Frampton and C. Norberg-Schulz's concepts the following key elements were selected: material, act of joining, structure and

the relationship with the context. These four elements were selected as they cover both physical as well as phenomenological properties of tectonic concept.

Finally, three completed built projects by Peter Zumthor were selected and analyzed in order to illustrate the different ontological tectonic qualities and aesthetical tectonic qualities in each design. The selected projects were examined and analyzed under the four key elements of tectonics and Zumthor's unique architectural tectonic representation and aesthetical ideas were found.

## 2. Tectonic in Architecture

### 2.1. General Meaning of 'Tectonic'

The word 'Tectonic' comes from the Greek word 'Architekton' which means architecture or architect in English. 'Teckton' from 'Architekton' specially means a carpenter or an architect and generally used to describe a master craftsmen, excluding silver smiths. When the word 'tekth' was used as a pre fix, it came to mean 'combination by weaving'. Therefore, the word 'tectonic' means 'Art of jointing' and was mainly used to describe materialistic, structural and weaving technique of a master carpenter.<sup>1)</sup>

Until recently the term 'tectonic' was mainly used in connection with 'building' or 'construction'. However, when the origin of the word 'tectonic' is considered, it has a meaning beyond 'building' or 'construction' and includes a broader concept including the relationship between materials, joining technique, physical and technological dimension of structure. Therefore, the meaning of 'tectonic' became to extend to include the metaphysical and integrated technological methods as well as aesthetical values. It mainly refers to the close relationship between the aesthetic quality formed by structure, construction and materials that work in a harmonious manner. It extends its meaning to the 'metaphysical' level and covers technical as well as aesthetical ideas.

### 2.2. Concept of Tectonic in Modern Architecture

#### (1) Kenneth Frampton's Tectonic Theory

1) Kenneth Frampton, *Rappel A L'Ordre: The Case for the Tectonic*, Architectural Design, vol.60, 1990, pp.19-25

Kenneth Frampton, basing his theory on more historical theories of K. O. Muller, Gottfried Semper, and Karl Botticher from the 1850's, among others, concluded that tectonic has two modes: 'ontological tectonic' and 'representational tectonic'. 'Ontological tectonic' elements represent the structural flow thus emphasizing the static role and cultural status. However, the second is the representation of construction element that has no relation to the structural role. The 'representational' tectonic can be further divided into 'representational tectonic' and 'representational atectonic'.<sup>2)</sup> He concluded that in modern architecture, tectonic is the poetical expression of structure.<sup>3)</sup> He also draws attention to the contrast between the heavy-stereotomics and the light-tectonic and takes Carlos Scarpa's projects to illustrate what he means.<sup>4)</sup>

#### (2) C Norberg-Schulz's concept of Tectonic

A Norwegian architect C. Norberg-Schulz based his concept of tectonic on Heidegger's <Building, Dwelling, Thinking><sup>5)</sup> and illustrated that the phenomenological potential of architecture is in creating a unique place thus evoking a deeper meaning to the environment.<sup>6)</sup> He emphasized the classical Roman concept of the 'spirit of the location', 'genius loci'. He stated that the most fundamental form of architecture is creating a room into a place that accommodates a peaceful life, in a protected location. He states that the horizontal surfaces such as walls, floors and the ceiling, boundary were of particular importance in creating the 'place'.<sup>7)</sup> Schulz's concept of tectonic has two distinct threads; firstly the importance of the space in relation to it's location which is explained by the theory of phenomenology, secondly the importance of the use of 'material' that includes color, texture, light and detail of the joinery.

2) Frampton, Kenneth, *Studies in Tectonic Culture: The Poetics of Construction in Nineteenth and Twentieth Century Architecture*, MIT Press, 1995, pp.16-19

3) 김낙중, 루이스 칸 건축의 구축적 특성에 관한 연구, 서울대 박론 1998, pp.44-45

4) Kenneth Frampton, *Rappel A L'Ordre: The Case for the Tectonic*, Architectural Design vol.60, 1990, pp.19-25

5) Martin Heidegger, *Building, Dwelling, Think <Poetry, Language, Thought>*, New York, Harper & Row, 1971

6) 김낙중, 루이스 칸 건축의 구축적 특성에 관한 연구, 서울대 박론 1998 p.42

7) Christian Norberg-Schulz, *Existence, Space & Architecture*, Praeger Publishers, 1974, p.27

<Table 1> Concept of Tectonic & Key Elements

	Concept of Tectonic	Key Elements
Kenneth Frampton	Building is an act of tectonic Tectonic is a poetical expression of structure: categorized 'ontological tectonic', 'representational tectonic' and 'representational atectonic' Ontological tectonic ↔ Representational Tectonic concept	Material Structure Joint, Break (disjoint)
C. Norberg-Schulz	Phenomenology includes site and tectonic Architectural Detail represents the characteristics of the environment Material, light, color and symbolic and tactile importance of joinery Refers to Heidegger's concept of dwelling	Material, Light, Color, Joint, Location (site)

From the late 20th Century the classical concept of tectonic has been broadened and interpreted in various ways. It can be divided into two groups, thus becoming dualistic concept. The first one is that of Ontological tectonic; of material and of something physical. The second is that of subjective element; non physical, spatial quality or its relation with the locality. For this research the following four key elements were selected from Kenneth Frampton and C. Norberg-Schulz: material, structure, joint and break/disjoint for the discussion of the 'physical' qualities of the tectonic; and the relationship with the site (context) which is the 'non-physical' quality of tectonic.

### 3. Tectonic in Architecture

#### 3.1. Material and Materiality

The relationship between materials and architecture is a complex one and cannot be considered separately. The history of architecture is also the history of material and construction development, invention of new technology. The new discovery of a new material or a construction method became a new turning point in architecture and enabled architects to express their ideas in a new light.

However, before the industrialization, the building materials had to be found locally. The method of transport also affected the choice materials available. With these restrictions, it was inevitable for a building to be connected to the place, not only in terms of geographical connection but also the psychological connection. But with the development of transport and manufacturing process and the increased interest in



<fig. 1> Mies van der Rohe, Glass Tower Proposal, 1922

economic efficiency, people started to search for cheaper materials. Simultaneously, the close relationship between the building and the locality fast became lost. The shift in the interest in material is clearly illustrated in Mies van der Rohe's design proposal for the Glass Tower in 1922. He emphasized the importance of the perception of materiality through architectural representation. The material

presence or non-presence of glass in the Glass Tower and the tectonics of the steel structure framing reinforced his argument of "Rather than attempting to solve new problems with existing forms, we need to start with the fundamentals of the problem to develop a new form." It is also quite evident to see in his Barcelona Pavilion that the use of onyx, glass and chrome in their purist form to create a unique composition of different materials.

It is evident that with the development of material science and technology, architects have been able to express their diverse ideas and concepts through different materials. In Peter Zumthor's projects, he demonstrates a unique understanding of materiality. It is apparent to note that his selection and the use of particular materials create a special relationship with the locality, time and memory of the space.

#### 3.2. Joint and Break Method

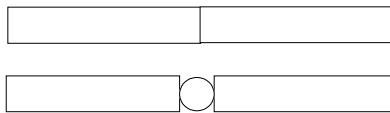
The detail of how materials are joined together or how different materials come to meet, form the main part transforming architectural ideas into realization. Kenneth Frampton wrote that a psychological value is in every material thus every joint is more than a moment where materials come together but bring about an existential meaning.<sup>8)</sup> He also put an equal importance on places where one material meets a different material and identified these as 'break' or 'dis-joint'.<sup>9)</sup>

8) Kenneth Frampton, *Rappel A L'Ordre: The Case for the Tectonic*, Architectural Design vol.60, 1990, pp.19-25

9) The idea of disjoint is one of the main concepts of Gevork Hartoonian, however, in order to focus the study on Frampton and Shultz, the writer selected the idea of 'break' from Kenneth

The difference between joint and break is that in a joint situation the point where the two come together is not apparent whereas in a break situation the quality of the material and the way the material come together are intentionally accentuated and more conspicuous. The break method enables emphasized tectonic representation. The break method can be used in both 'onthological tectonic' and 'representational tectonic'. To emphasize the 'onthological tectonic', materials are put together in a manner that they can be read individually and clearly see how the load is transferred. In 'representational tectonic', 'dis-joint' situation, the individual materials do not carry any load but 'seem' to be part of structural system.<sup>10)</sup>

'Break' in tectonic is particularly important because since the 19th century, the use of diverse materials meant that architects could make use of the method of how materials are brought together as an expression tool to integrate the whole design. <Fig. 2><sup>11)</sup> below shows the fundamental idea of 'joint' and 'break (dis-joint)'.



<fig. 2> Joint is where two come together to make one continuous element; Break/ Disjoint is where the joint has been made to make each element appear independent from the next.

### 3.3. Structural Characteristics

Within the concept of tectonic, the structure can be considered as the method of construction: closely related to 'joint' and 'break' ideas. This is because through construction, the building becomes independently erect and tectonic is the physical method. The elements that form the frame and support the load are most frequently done at the 'joints'. Therefore it can be considered that the role of 'joint' is the structurally completed image of architectural existence. The heaviness of the load can be expressed through the design of the 'joint', either by portraying the weight or defying it. The structure

works as the skeletal frame which enables the formation of the whole. The meaning of 'joint' completes and clarifies the structural system. The heavy parts that make a 'joint' may express the attempt to resist gravity when they are brought together in a 'lighter' manner in appearance. It can be regarded that the very first phase of tectonic construction occurs when materials are used as structural system that resist the force of gravity.

### 3.4. Context

The meaning of tectonic does not only cover the physical properties, such as materials and structures, but also the tactile response, relating to the human body with the spatial experience. As pointed out by Frampton and others, the fundamentals of tectonic lie in the construction of structure that resist gravity as well as the materials and how these materials are brought together at the joints or not brought completely together at the joints.

"Thus we may claim that the built invariably comes into existence out of the constantly evolving interplay of three converging vectors, the topos, the typos and the tectonic."<sup>12)</sup> If 'Typos' deals with the conceptual and perceptual element, 'Topos' is the location where the building will be located and the forces of the ground, and finally 'Tectonic' is the process of constructing a building on that specific site. Therefore, when the idea of 'Typos' deals with the 'invisible' concept, 'Topos' and the 'Tectonic' are both visible and tactile.

It must not be over looked that the discussion of tectonic covers the relationship of the building with the immediate site but at the same time it extends to the social and cultural impact through the construction. The surrounding nature, land, tradition, urban environment, social and cultural backgrounds are all inter-related and fall under the term 'mega-tectonic'<sup>13)</sup> that has a reciprocal relationship with the 'tectonic'

Architecture cannot be regarded as an independent

Frampton's theory.

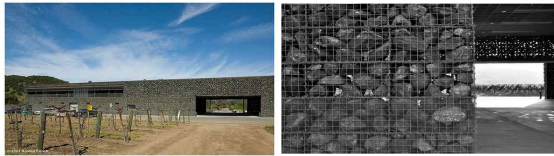
10) 김낙중·정태용, 루이스 칸 건축에 나타나는 반접합의 의미에 관한 연구, 한국실내디자인학회논문집, 2009.6, p.40

11) 김낙중, 루이스 칸 건축의 구축적 특성에 관한 연구, 서울대 박문 1998, p.68 <표 13>

12) Frampton, Kenneth, Studies in Tectonic Culture: The Poetics of Construction in Nineteenth and Twentieth Century Architecture, MIT Press, 2001, p.2

13) This idea is conceived by Wilfried Wang in his book 'Conceiving architecture, materializing idea'. Mega-tectonic mainly addresses that the tectonic construct is a visual link between culture and society.

'object' from its surroundings. Sverre Fehn pointed out that, 'Architecture is an art embedded in the land. A building belongs to the place. A drawing cannot portray or communicate fully the feeling or the ambience of the room'. Peter Zumthor wrote that he has a passionate desire to design such buildings that in time that grow naturally into being a part of the form and history of their place.<sup>14)</sup>



<fig. 3> Herzog & de Meuron, Dominus Winery, California, 2009

Herzog and de Meuron's Dominus Winery is a good example of architectural tectonic related to its place. The main volume has been constructed in the local stones and rocks that have been encased in wire mesh, using gabion method, more common as a civil engineering technique. The exterior facade creates a building that is suited to the immediate surrounding with the material found locally. This quality makes the winery closely tied to its locality.

## 4. Tectonic and Zumthor's Architecture

### 4.1. Saint Benedict Chapel, Switzerland 1988

#### (1) Use of Material



<fig. 4> Peter Zumthor, Saint Benedict Chapel, Switzerland, 1988

Zumthor has used different physical properties of one main material, wood, to distinguish the exterior skin, structure, interior, furniture and gave diversity and variation.<sup>15)</sup> The local construction methods of shingle roof and the thin tiling of the wooden wall have been used and appear very familiar as a traditional construction method. The weathering on the facade has also added a distinct quality of time to the building. The interior finish is more refined and

controlled in order to create a calm atmosphere that has been enhanced by the introduction of daylight through the windows located at the top of the wall. This enables the visitors to look up towards the sky or the distant mountain slopes, while praying or meditating on the row seats.

(2) Joint and Break Method

It is clear to see the distribution of the load from the roof beams to the structural columns thus demonstrating an 'ontological tectonic' through disjoint method. The joints between the columns and the roof



<fig. 5> Detail Section

beams, columns and the floor panels are in 'Break' manner, enhanced with a rim between the beams and the columns. The connection between the skin and the columns is also very minimal but still in 'break' manner. Therefore these elements appear very light and fragile.

#### (3) Structure



<fig. 6> Section showing the structural system

There are 37 wooden structural columns and the same material has been used for the roof, wall and the floor. These columns support the roof and the floor panel is held by these columns - off the sloping landscape.

#### (4) Context


This chapel is located in a small village called Sumvgt, on the mountain slopes of the Alps. It is quite clear to see that the elliptical shape of the chapel follows the line of the slope which appears like a tree stump that is deeply rooted in the landscape. Its appearance, although not large in size, is a landmark for the locality.

When seen from a distance, the chapel emerges out of the ground but at a closer inspection, the building stands on a firm concrete platform. It is easy to expect that such method has been used to protect the exterior facade material from the rising damp of the ground but also implies Zumthor's intention for the chapel to exist as an independent entity off the ground.

14) Zumthor, Peter, Thinking Architecture, Birkhauser, 2006, p.17

15) Peter Zumthor talked about the use of the same material with a different results, emphasizing the endless possibilities in his book, 'Atmospheres'

<Table 2> Concept of Tectonic & Key Elements

Category	Concept of Tectonic Key Elements
 Material	The main material is of wood, which was acquired locally. The same material has been applied differently for the roof, skin, structure, interior and furniture. One side with much weathering of the sun shows passing of the time through material. The building has been separated from the ground by concrete foundation.
 Joint and Break	The structural elements indicate 'break' method - The interior panels and floor panels have been put together with the structure as independently as possible, with minimum connections, to appear as light and as possible. Thus the floor feels floating with a skin that gently wraps around the floor.
 Structure	It is of elliptical form with vertical wooden structure, which is a reminiscent of local buildings but interpreted into an entirely new manner. The structure is separated from the skin, roof and the floor.
 Context	From a distance the building appears to sprout out of the slope, which is also deeply rooted in the ground. But the concrete foundation is exposed above the ground surface. The building has an independent existence

## 4.2. Thermal Vals, Switzerland 1996

### (1) Use of Material



<fig. 7> Peter Zumthor, Thermal Vals, Switzerland, 1996

The building consists of 25 volumes in a series, built in 60,000 blocks of local Valser Quarzite slabs create an overall atmosphere of solidity and being deeply rooted in the locality - not only in terms of its physical location but also in terms of the use of local materials. (genius loci)

The main material became the driving inspiration for the design and is used with great dignity and respect. Zumthor's summary of the project, "Building in stone, building with stone, building into the mountain, building out of the mountain, being inside the mountain - our attempts to give this chain of words an architectural interpretation, to translate into architecture its meanings and sensuousness."<sup>16)</sup> addresses most directly about the tectonic quality of the design. The different volumes created in stone slabs, with differing light, reflection and views, the

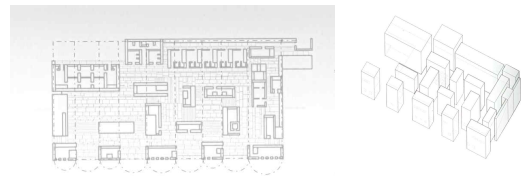
16) Peter Zumthor, Peter Zumthor Therme Vals, Scheidegger & Spiess, 2007, p.57

combination of light and shade, open and enclosed space make the highly sensuous and restorative experience.

### (2) Joint and Break Method

In contrast to St. Benedict's Chapel, Thermal Vals used 'joint' method. The thinly cut slabs were stacked in layers on top of each other. Majority of the walls appear smooth surfaces with different gradations of stone slabs. The distinct characteristic of joint method is particularly strong as the volumes (rooms) seem to have been carved out of one massive stone.

### (3) Structure



<fig. 8> Diagrams showing the structural module and masses

The structural system is not as apparent as St. Benedict's Chapel's 37 structural columns. The solid walls of in stone slabs are in fact a compound masonry construction, with the double-front construction of stacked stone with the concrete poured into the space between<sup>17)</sup>. As illustrated by <fig. 8>, the spatial experience of Thermal Vals is the repeatedly alternating experience of the solid (structure) and void (space) The sequential experience of the space connects the users with their own memories and experiences that this project has become a prime example of how the sensory potential can be continuously related with the users through the atmosphere created by the material's haptic, olfactory and even the taste sense.<sup>18)</sup>

### (4) Context

In this project, Zumthor has reinterpreted the notion of bathing as a 'religious' act, a purification process through the emersion in the water and thus becoming a reminder of 'baptism' as well as an experience of being in a cave that has been transformed through architecture.<sup>19)</sup> Being half embedded in the slope


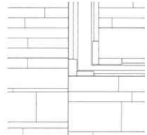
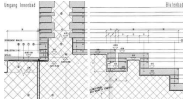

17) Peter Zumthor, Peter Zumthor Therme Vals, Scheidegger & Spiess, 2007, p.110

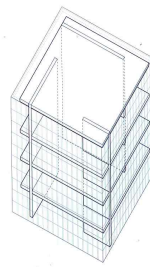
18) 김자영, A Study on the Spatial Effect of Material and Light: Focusing on Peter Zumthor's Projects: Bruder Klaus Chapel and Kolumba Museum, 한국실내디자인학회논문집, 2011.10, p.89

19) 백홍렬 · 박길동, 피터 Zumthor 건축에서 빛의 구축성에 관한 연구, 대

makes the building a part of its context.

<Table 3> Concept of Tectonic & Key Elements

Category	Concept of Tectonic Key Elements
 <p>Material</p>	60,000 blocks of local Valsler Quarzite slabs were used to create a series of differing volumes and atmospheres. The material has been quarried locally to add a distinct identity of being rooted in the locality. The blocks are of three different thicknesses and 12 inches in length.
 <p>Joint and Break</p>	The main material in Valsler Quarzite slabs have been joined to appear as one solid mass. The detail of material connection can be described as 'joint' It is clear to see how the slabs have been layered on top of the other.
 <p>Structure</p>	The twenty five volumes are built with concrete structure with stone slabs stacked on one side or both. Concrete also acts as a sealant of the stone slabs.
 <p>Context</p>	The building is half buried in the mountain slope and appears as an extension of the mountain or a broken part of the mountain. The building is physically connected to the context.



<fig. 10> Structural system

from the actual building which is in concrete. The load of the building is supported by the three concrete walls that penetrate through all levels. The load of the facade is independently supported by the double skin steel frame system. The structural system is not so conspicuous as they have been strategically located to become the background walls of the exhibition space and the supporting structure for the dramatic staircases.

(4) Context

This museum is located not far from the lake of Bregenz in a densely built city center. The museum building and the lower administration building frame the plaza which became an attractive meeting point for the locals. The relationship between the museum with its outdoor plaza in its context has made a new transition area between the tranquility of the lake and the busy city. It has a distinct role in an urban context.

4.3. Kunsthaus, Bregenz, Austria 1997

(1) Use of Material



<fig. 9> Peter Zumthor, Kunsthaus, Bregenz, Austria 1997

In contrast to the solidity of Thermal Vals, Kunsthaus appears very light with the extensive use of etched glass sheets for the four facades.

He has made three concrete boxes, without lids, as the exhibition space and these boxes are independent from the glass ceilings and walls and enables the entry of daylight.





(2) Joint and Break Method

The main facade which is a double skin in etched glass is a good example of 'dis joint' method where each material can be read separately. The etched glass panels sit on steel frame structure only held by the brackets. The layers of glass sheets refract and diffuse light and has a sublime presence against the heaviness of the concrete walls.

(3) Structure

The structural system for the facade is independent

<Table 4> Concept of Tectonic & Key Elements

Category	Concept of Tectonic Key Elements
 <p>Material</p>	Glass is used not as a transparent material but a translucent material.
 <p>Joint and Break</p>	The glass panels, metal brackets and the structural system for the facade are seen as independent elements thus emphasizing 'dis joint' method. The over lapping panels appear like fish scales (imbrication) and allows natural ventilation and actively refract and diffuse the sunlight into the exhibition spaces.
 <p>Structure</p>	The structural system, in concrete walls, is totally independent from the facade system. The building is supported by three reinforced concrete walls.
 <p>Context</p>	The location of the museum acts as a connector between the lake and the city center. With the public open space in front of the museum, it has an important role in the urban context.

한건축학회 학술발표논문집 제21권 제1호, 2001.4.28, p.400

<Table 5> Summary of Concept of Tectonic & Key Elements in the three case projects

Project/ Tectonic qualities	Material	Joint and Break method	Structure	Context
St. Benedict Chapel	Wood - Use of locally acquired material emphasizing its connection to the locality.	Break - the skin, structure, floor and the ceiling are separated from each other; emphasizing each element's independent existence	Ontological tectonic - the wooden columns carry the load	It appears to grow out of the slope, its material in harmony with the context. The concrete foundation is a statement of independent entity.
Thermal Vals	Valsar Quazite stone slabs - Use of locally quarried stone; emphasizing its connection to the locality	Joint - Stone slabs are stacked into one continuous solid; emphasizing its solidity that comes out of the slope.	Ontological tectonic - the thick solid walls in stone slabs and concrete carry the load	It is a part of the context, as an extension of the mountain built out of stones from the mountain.
Kunsthaus	Etched glass panels - Reflecting the surrounding urban scene; being absorbed into the locality	Break - Imbrication of glass panels fixed to brackets. Each element can be read separately.	Representational tectonic - the structural system is independent from the glass envelope.	It is an important urban connector in its context. It has a 'psychological' linkage with the site.

## 5. Conclusion

As it was focused in this study, the meaning of tectonic from the late 19th century has developed into the fundamental ideas of material, joint and break, structure, and the relationship between the building and its context. Through this study, Peter Zumthor's projects have been analyzed under those four categories in terms of tectonic and the findings are summarized in <Table 5>.

1. Material: In the case studies, Zumthor used locally acquired material or material that reflects or absorbed by the surroundings. His use of material in this manner emphasizes the existence of the building in its locality from its locality.

2. Joint and Break: Depending on the choice of material and the function of the interior, he freely opts for both joint and break method. The use of joint or break method is further heightened by the relationship with the context or the function of the skin.

3. Structure: The structural system for St. Benedict chapel is a part of the whole ambience of the project, both in its appearance and material. In Kunsthaus there is a conscious action to separate the structure from the skin. The structure is in concrete, which contrasts in appearance. In the case of Thermal Vals, the structural elements are the concrete walls and the layered stone which also make up the skin.

4. Context: In all three projects, and for other projects, Zumthor has a particular interest and emphasis on the relationship between the building and its context. For all three projects there is a special site specific relationship, thus if these buildings were removed and placed elsewhere, they will lose their

unique spatial identity and the completedness in terms of their tectonical qualities.

It was clear that Peter Zumthor adopts and finds a particular characteristic for the building in its context in terms of material, structure, joining method thus creating a unique spatial and tectonic identity for his design projects.

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