

RECONCEPTUALIZING THE ARCHITECTURAL PRECEDENT:
TEXTUAL MODELS OF READING

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TEXTUAL MODELS OF READING**

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ABSTRACT

RECONCEPTUALIZING THE ARCHITECTURAL PRECEDENT: TEXTUAL MODELS OF READING

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The aim of this thesis is to reconceptualize the “architectural precedent” in a way to reveal its potentials as an instrument for architectural design and education. The main concern is to use the architectural precedent as a source of knowledge and form generation, but not as a model for functional problem solving. In order to generate new knowledge and form, the precedent should be read textually rather than formally. While formal reading reveals existing knowledge underlying the precedent, textual reading produces new knowledge, which can be utilized for generating a new form transcending the original object. In order to read buildings textually, the architectural precedent should be reconsidered as a trans-historical concept.

This thesis is concerned with both the methodological aspects of textual reading as a generative act and the epistemological aspects of the knowledge produced by these processes. It is argued that the methodology of textual reading is inherent to the object’s process of making and that there is no single method for reading all buildings. Therefore, this thesis proposes three models for reading precedents: textual-analytical model, textual-transformational model, and textual-decompositional model.

It is argued that textual reading of precedents is also a generative act rather than merely analytical. It is stated that reconceptualized as a trans-historical concept, the precedent has the potential to initiate design process. Defining the precedent as a catalyst for creativity and invention rather than a barrier against it, this thesis discusses the educational potentials of the architectural precedent and textual reading.

Keywords: architectural precedent, formal and textual reading, analytical model, transformational model, decompositional model.

ÖZ

MİMARİ ÖNCÜLÜN YENİDEN KAVRAMSALLAŞTIRILMASI: METİNSEL OKUMA MODELLERİ

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Bu tezin amacı mimari öncülü yeniden kavramsallaştırarak mimari tasarım ve eğitim alanındaki potansiyelini ortaya çıkarmaktadır. Tezin en temel kaygısı mimari öncülün işlevsel problem çözümünde bir model olmanın aksine bilgi ve biçim üretimlerinde kullanılmasıdır. Yeni bilgi ve biçim oluşumu için mimari öncülün biçimsel değil metinsel olarak okunması gerekir. Biçimsel okuma öncülün altında yatan var olan bilgiyi açığa çıkarmakta, metinsel okuma ise öncülün kendinde var olmayan bir bilginin üretilmesini sağlayarak asıl nesnenin mevcudiyetinin sınırlarının ötesine geçmektedir. Binaları metinsel olarak okuyabilmek için mimari öncülün tarih-ötesi bir kavram olarak yeniden kavramsallaştırılması gerekmektedir.

Bu tez, metinsel okumayı üretken bir eylem olarak nitelendirmekte, metinsel okumanın yöntembilimsel yönleri ve üretilen bilginin bilgi kuramsal yönleriyle ilgilenmektedir. Her binanın metinsel özellikleri kendine özgü ve yapıma biçimiyle ilişkili olduğundan her binayı okumak için kullanılabilecek tek bir yöntem yoktur. Bu nedenle tez mimari öncüllerin metinsel okuması için çözümlemeli model, dönüşümsel model ve ayrışimsal model olmak üzere üç farklı model önermektedir.

Bu tez metinsel okumanın yalnızca çözümleyici bir eylem değil, üretici bir eylem olduğunu tartışır. Tarih-ötesi olarak yeniden kavramsallaştırılan mimari öncülün tasarım süreçlerini başlatma potansiyeli olduğunu öne sürer. Mimari öncülü yaratıcılık ve yenilik için bir engel değil katalizör olarak gören bu tez, mimari öncül ve metinsel okumanın eğitsel potansiyelini tartışır.

Anahtar kelimeler: mimari öncül, biçimsel ve metinsel okuma, çözümlemeli model, dönüşümsel model, ayrışimsal model.

To Onur

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CHAPTER 1

INTRODUCTION

1.1 Problem Definition

The aim of this thesis is to reconceptualize the “architectural precedent” in a way to reveal its potentials as an instrument for architectural design and education. The main concern is to use the architectural precedent as a source of knowledge and form generation, but not as a model for functional problem solving. Although, the knowledge of precedent can be utilized for generating practical knowledge, which can be applied in future design processes, such knowledge is not necessarily bound to formal aspects, which involves intent, function, structure, and technique.¹ This thesis acknowledges that there are two ways of reading architectural precedents: formal and textual. While formal is related to how the object is seen –i.e. optical-, textual is related to how it is conceived and perceived –i.e. visual and conceptual-.² The formal aspects of the precedent are obvious to the eye, whereas its textual aspects are ambiguous and in need of further exploration.

Therefore, this thesis argues that, to generate new knowledge and form, the architectural precedent should be read textually rather than formally. While formal

¹ Peter Eisenman, *The Formal Basis of Modern Architecture* (Ph.D. diss., Trinity College, University of Cambridge, 1963; Baden, Switzerland: L. Müller, 2006). Eisenman considers intent, function, structure, and technics as main aspects of specific form.

² Peter Eisenman, *Ten Canonical Buildings 1950-2000* (New York:Rizolli, 2008), 16. Seeing with the mind also means seeing what is implied by the façade rather than what is obviously seen. Also see Peter Eisenman and Colin Rowe, “Interview with Peter Eisenman: The Last Grand Tourist: Travels with Colin Rowe,” *Perspecta* 41 (2008): 133.

reading reveals existing knowledge underlying the precedent, textual reading produces new knowledge, which can be utilized for generating a new form transcending the original object. Different from formal reading that is analytical, textual reading is both analytical and generative. This thesis is concerned with both the methodological aspects of textual reading as a generative act and the epistemological aspects of the knowledge produced by these processes. It is argued that the methodology of textual reading is inherent to the object's process of making and that there is no single method for reading all buildings. Therefore, this thesis proposes three models for reading precedents: textual-analytical model, textual-transformational model, and textual-decompositional model.

In order to read buildings textually, the thesis argues that the architectural precedent should be reconsidered as a “trans-historical” concept. If one conceives architectural precedent as “historical”, the precedent becomes a fragment of a coherent whole within a chronological continuity. Such conception causes the precedent to be understood from a limited point of view, thus, undermining its potentials of generating new knowledge and form. And yet, the precedent cannot be conceived as “ahistorical” either, because the word precedent already implies existence of an object in time. Departing from this duality, this study reconceptualizes precedent as a trans-historical term, in which the existence of the object transcends time, and the knowledge and form generated from the precedent transcends the original object in question.

Although, precedents are already utilized in architectural practice and education, this thesis argues that their generative potentials are not fully explored. Therefore, the main objective is to prepare a theoretical framework with reference to which the generative and pedagogical potentials of architectural precedent can be understood. And, the main research question is how to read the architectural precedent so that it results in generation of new knowledge, which is not specific knowledge related to a design problem at hand but generic knowledge of design principles. The question of how such knowledge will be used in practice and education is not a concern of this study, but may be addressed in future research.

1.2 Assumptions of the Dissertation

Aiming to develop a theoretical framework for reading architectural precedents, this thesis states eight major assumptions related with the conceptual aspects of defining architectural precedent, the methodological aspects of reading and the epistemological aspects of the knowledge generated through this reading.

Assumption 1: Disciplinary knowledge can be attained by exploring the past, and then applied in present and future. The knowledge of the past contains both the knowledge of history and precedent. While the knowledge of history is theoretical, knowledge of precedent is practical.

Assumption 2: Though the knowledge of precedent contains the knowledge of the past, it is not necessarily historical. Precedent may be divorced from historical connotations and reconceptualized as a “trans-historical” term.

Assumption 3: Precedent constitutes a source for the generation of new knowledge as well as new form.

Assumption 4: There are two ways of reading the architectural precedent: formal and textual. Formal reading is concerned with the optical aspects of the precedent, whereas textual reading is concerned with its visual and conceptual aspects. Formal aspects of the precedent are obvious, yet its textual aspects are ambiguous.

Assumption 5: To generate new knowledge and form, the precedent should be read textually rather than formally. While formal reading of precedent is limited to the presence of the object itself, textual reading extends beyond the boundaries of the object’s physical presence. The knowledge and form generated by textual reading does not preexist with the precedent.

Assumption 6: Textual reading of precedent necessitates the denial of causality, contextuality, historicity, intentionality, and diagnosticity. Therefore, textual reading is a form of “intentional misreading”.

Assumption 7: Textual reading of precedents is not only an analytical act but also a generative and regenerative act. Therefore, textual reading is a form of “creative misreading”.

Assumption 8: Any building can be read textually. Yet, according to its “process of making”, each building requires a different model for reading.

1.3 Uses of Precedent in Architecture

Various uses of precedent could be observed in architecture, such as “precedent-based design”, “precedent-based learning”, and “precedent-based reasoning”. These concepts could be associated with Donald Schön’s concept of “reflective practice” in the sense that the knowledge of precedent can be applied in practical design situations. “Design memory” and “repertoire-building”, which constitute the basis of reflective practice, are related to the concept of precedent as they indicate the accumulation of precedent-based knowledge. Moreover, Richard Foqué introduces “practice-based research” as the use of the precedent as a source of disciplinary knowledge.

A precedent in architecture is usually defined as a pre-existing case, which can be analyzed and adapted to utilize in current or future design problems.³ Today, a vast percentage of designers search for precedents, both inside and outside architecture, which may assist them in design processes. They consider precedents as references for design. Providing the designer with a departure point, whether architectural or non-architectural, precedents are thought to save designers energy and time since they

³ Ömer Akın, “Case-based Instruction Strategies in Architecture,” *Design Studies* 23 (2002): 407-431.

prevent them from reinventing the world from scratch.⁴ Such act of design based on a selection of relevant ideas from prior designs and adapting them to current design situations is called “precedent-based design”.⁵

Besides its use in the practical field, precedents are formally utilized in architectural education. While architectural history courses usually introduce a catalogue of precedents, which represents the style or technique of a specific epoch, the design studio may expect the students to benefit from precedents in regards to problem solving. In architectural design studios, students may be asked to investigate a case thoroughly and make a presentation in the class. The precedents in the studio are chosen by the instructor according to their relevance to the design problem given: stylistic, functional, structural, or conceptual.⁶ It is assumed that starting with a precedent helps the student learn the relevant aspects, which later may be useful in their own design project. Such an approach is called “precedent-based learning”.⁷

⁴ Joo-Hwa Bay, “Cognitive Biases in Design: The Case of Tropical Architecture,” (Ph.D. diss., Technische Universiteit Delft, 2001), 2. In his dissertation Bay argues that referring to precedents for design reasoning is beneficial for preventing “combinatorial explosion in thinking” which stems from the impossibility of analyzing all possible alternatives with human resources. However, Bay deals with the problem of biases or illusions that may lead the architect who uses design precedents, to errors; therefore, he proposes a design tool to eliminate these problems.

⁵ B. Hasan Eilouti, “Design Knowledge Recycling Using Precedent-based Analysis and Synthesis Models,” *Design Studies* 30 (2009): 344. According to Eilouti, precedent-based design evolves from proper precedent-based analysis and informs precedent-based evaluation. For precedent-based design also see Karina Moraes Zarzar, *Use and Adaptation of Precedents in Architectural Design: Toward an evolutionary design model*, (Ph.D. diss., Technische Universiteit Delft, 2008). Zarzar develops a pre-computational model to explain the phenomenon of change that occurs through the re-use of design precedents (both architectural and non-architectural precedents) in architecture. She argues that modification and recombination of precedent-components may result in innovative design, which is different from direct and literal use of precedents or types -a process resulting in routine design. Zarzar’s study provides a basis for the construction of computational tools which are expected to facilitate precedent-based design practice via a model that grasps significant characteristics of the design process as it employs precedents. To develop the “evolutionary model,” Zarzar refers to the “Darwinian Theory of Evolution” as well as some recent theories of genetics and embryology. For the relation of theory of evolution to precedent-based design also see See Hakan Anay, “Two Evolutionary Models for Reconceptualizing Architectural Ideas and the Architectural Design Process” (Unpublished Ph.D. diss., Middle East Technical University, 2008).

⁶ Esma Bige Tunçer, *Architectural Information Map: semantic modeling in conceptual architectural design* (Ph.D. diss., Technische Universiteit Delft, 2009).

Precedents provide a valid form of reasoning for design decisions through an analogy between the precedent and the design problem in hand. Such reasoning is also used in the practice of law to a great extent, where a precedent constitutes an authoritative example for similar cases and influences the following judicial decisions in a binding way.⁸ That is to say, precedents are also considered as benchmarks for evaluation as well as references for future act. This type of reasoning based on an analogy between precedents and between a precedent and the design problem in hand is called “precedent-based reasoning”.⁹ The concept of precedent-based reasoning is also related to the concept of “case-based reasoning” which is a method developed within the field of artificial intelligence and the theory of dynamic memory.¹⁰

There are some computational assistant tools or programs, which work by case-based reasoning and operate through the browsing of cases, problem matching and adaptation.¹¹ In these programs, relevant cases are recorded within a case library and

⁷ Precedent-based learning is an experiential method which was first developed by Harvard Law School in 1870s under the name of case-based learning. Introduced by Christopher Columbus Langdell, the case method was based on deducing general principles from intensive study of previous court decisions in a systematic manner. The advantage of the case method was that the lawyers would no longer have to learn each state’s laws separately as in the rule-base method, but just the general principles derived from past decisions. Therefore, the case method would allow lawyers to practice anywhere regardless of the differences in state laws. According to Langdell, learning the cases meant learning how “to think like a lawyer”, thus, it was the best way to prepare law students for the world of practice. This innovation brought by the Law School was later adopted by Harvard Business School and the Medical School respectively. This method utilized by the disciplines of professional practice has become an alternative of the normative rule-based learning which is utilized by other disciplines. See David A. Garvin, “Making the Case: Professional Education for the World of Practice,” *Harvard Magazine* 106 no.1 (2003): 56-58.

⁸ Sandra Weedle and Marc Neveu, “Introduction: Beyond Precedent,” *Journal of Architectural Education* 64, no. 2 (2011): 7.

⁹ See Kemal Mubarak, “Case-based Reasoning for Design Composition in Architecture (Ph.D. diss., Carnegie Mellon University, 2004), 13. Mubarak defines design precedent as “a prior design that has some interesting architectural characteristics for designers to refer to”.

¹⁰ Akin, 416. Janet Kolodner was the first to develop a computer-based system which has managed to conduct case-based reasoning through browsing cases, problem matching, and adaptation. Also see Janet Kolodner, *Case-based Reasoning* (San Mateo: Morgan Kaufmann, 1993).

¹¹ One of these tools is ARPRAN (ARchitectural PRecedent ANalyst), an intelligent system capable of analyzing plans of architectural precedents in order to represent their characteristics of spatial organization and to provide useful information for generating new designs. See Nan Fang, “A

browsed during problem solving to find relevant examples.¹² Whether computational or non-computational, case libraries transform the contents of the internal memory of designers into an “external memory” which is more “accessible, searchable and reusable”.¹³ Portfolios, sketchbooks, periodicals, and exhibition catalogues can also be considered as external memories from which precedents can be browsed and studied.

While design precedent refers to physical products, which embody previous design experiences and solutions, “design memory” refers to their intellectual recording.¹⁴ Recording the precedent-based knowledge in their episodic memory, designers form “a pool of precedents” and “tricks”, which can later be used in case of relevant problems. This knowledge constitutes the repertoire of the designer.¹⁵ Using the game of chess game as an analogy, Bryan Lawson calls the instances recorded within the episodic memory of the designer as *schemata*, and the tricks as *gambits*. The ability to do proper precedent-based reasoning depends on the level of expertise of the designer: it is easier for the experienced architects to recognize the relevant instances than novice architects.

The notion of precedent can also be related to Donald Schön’s concept of “repertoire-building” in reflective practice, which is defined as the “description and analysis of

knowledge-based Computational Approach to Architectural Precedent Analysis” (Ph.D. diss., Technische Universiteit Delft, 1993). Another program is ArcIMap (The Architectural Information Map) developed by Esma Bige Tunçer which operated by automatically detecting drawings of precedents and storing them in a database focusing on visual and structural analogies. What is significant about Tunçer’s study is that she has managed to test ArcIMap in the second year architectural design studio on 194 students. Then, Tunçer organized an evaluation process in which she spent 2.5 hour sessions with each group of five. It appeared that the program lacked an intuitive and user friendly interface and provided insufficient number of precedent examples within its library. Also see Tunçer.

¹² Akin, 416.

¹³ Eilouti, 344.

¹⁴ Ibid., 340.

¹⁵ Bryan Lawson, “Schemata, Gambits and Precedent: some factors in design expertise,” *Design Studies* 25 (2004): 448. A. D. de Groot’s study on chess players is in parallel to Lawson’s arguments that the chess masters who have a wider pool of precedents and tricks can easily defeat amateur players by only using standard gambits. What is interesting in this study is that it is not only the width of the pool which brings the chess master success, but also his developed ability to recognize and recall board situations

images, category schemes, cases, precedents, and exemplars”.¹⁶ In *The Reflective Practitioner: How Professionals Think in Action*, Schön argues that the knowledge acquired through pure scientific inquiry cannot explain the complicated nature of the “real world problems”.¹⁷ Since the problems in the swampy lowlands are too messy to be dealt with using research-based theories and techniques, Schön introduces the notion of “reflective practice” as “a way of generating knowledge” as well as “a way of learning”. Schön’s reflective practice is based on the tradition of modern design education in which the students learn through their own experience and the reflection of both the critics and the students themselves.¹⁸ The most significant characteristic of the knowledge acquired through reflective practice is that it can also be applied in practical design situations.

According to Schön, repertoire-building constitutes the base of reflective practice, and the width of repertoire is directly related with the level of expertise of the designer.¹⁹ Referring to Schön, the knowledge of precedent can be considered as a source for generating practical knowledge as well as a reason for action. Then, Schön’s concept of repertoire building in reflective practice can be related to precedent-based design, precedent-based learning, and precedent-based reasoning. Similarly, M. Laxton argues that the model of education for creativity is actually based on “past experience” rather than the “generation of new ideas,” and it is composed of three main stages: “accumulation of experience and knowledge”, “developing the skills of critical evaluation”, and “interpretation (transformation).”²⁰ That is to say, for Laxton, Lawson and Schön, the precedent constitutes the prerequisite of invention and creativity.

¹⁶ Onur Yüncü, “Research by Design in Architectural Design Education” (Ph.D. diss., Middle East Technical University, 2008), 90.

¹⁷ Donald A. Schön, “The New Scholarship Requires a New Epistemology,” *Change* 27, no.6 (1995): 27-28. Also see Donald A. Schön, *The Reflective Practitioner: How Professionals Think in Action* 1st edition (London: Basic Books, 1991).

¹⁸ Ibid.

¹⁹ Ibid. Also see Schön, “The New Scholarship Requires a New Epistemology,” 28.

The notion of precedent and repertoire building can also be related to practice-based research formulated by Richard Foqué. According to Foqué, practice-based research is essential for certain disciplines which cannot develop their own theories through pure scientific inquiry. Among these disciplines are law, medicine, and business administration as well as architecture. Criticizing architecture's reliance on other disciplines for developing theory, Foqué suggests that architecture should extract theory from its own knowledge via practice-based research and stop dwelling on knowledge borrowed from other disciplines.²¹ Within reflective practice, Foqué pays significant attention to repertoire-building case-based research:

Case-based research is the cornerstone of the reflective practice and the key to the development of theory from practice, as it has the potential to transcend individual theories, transforming them into generally accepted theoretical frameworks.²²

In this sense Foqué argues that architecture discipline should take Harvard University as a model in case-based theory development and case-based education.²³ Comparing the methods of law, medicine, and business administration Foqué develops a new model of case-based education for architecture.²⁴

1.4 Structure of the Dissertation

Defining the aim of this dissertation as “reconceptualizing the architectural precedent in a way to reveal its potentials as an instrument for architectural design and education” and stating the main assumptions, Chapter 1 briefly introduces the basic concepts related with the precedent and its use in the field of architecture: precedent-based

²⁰ Lawson, 454.

²¹ Richard Foqué, *Building Knowledge in Architecture* (Brussels: Antwerp Publishing, 2011), 152.

²² Ibid., 153.

²³ Ibid.

²⁴ Ibid., 195-208.

design, precedent-based learning, and precedent based reasoning. It is argued that the knowledge of the precedent is practical in purpose.

The concept of precedent as it is used in law, where it is defined as a binding example and its knowledge is considered as absolute and objective is introduced in the beginning of Chapter 2. Then, the main aspects of architectural precedent are stated with reference to John Hancock's theory of precedent. Precedent is defined as an intermediary concept acting in between tradition and history without being merely historical. The convincing limits of the precedent are determined as place, type, and principle, whereas the rigorous methods are defined as analytical, experiential, and transformational. Departing from John Hancock's definition of precedent as mediating between tradition and history, this thesis has moved towards a trans-historical definition of the term.

Since architectural precedent is reconceptualized as a trans-historical term, the main epistemological aspects of the new concept are discussed with reference to Harold Bloom's concept of "misprision" as a form of misreading. It is argued that textual reading rejects the idea of a single truth to be discovered beneath the precedent. Although there is no single rigorous method which can be applied to every building, the methodological aspects of textual reading is characterized by a denial of certain concepts: causality, contextuality, historicity, intentionality, and diagnosticity. Denial of these concepts is what differentiates textual reading from a formal one. Based on these fundamental aspects, three models of textual reading are developed: textual analytical, textual-transformational, and textual-decompositional models. It is argued that these forms of reading can be considered as models rather than methods and any one of these models can be applied to precedents according to their relevance.

In Chapter 3, the textual-analytical model is introduced as a form of reading which is based on mathematics, geometry, and musical concord. Colin Rowe's "Mathematics of the Ideal Villa", Jeffrey Hildner's "Remembering the Mathematics of the Ideal Villa", and Rudolf Wittkower's *Architectural Principles in the Age of Humanism* are

considered as the main texts with reference to which a textual-analytical model can be developed. The knowledge produced by textual-analytical reading is defined as objective, universal, and absolute. Main indicators of this model are determined as colon, summary sequence, dimensional datum, grid, and field.

In Chapter 4, the textual-transformational model is presented. Beginning with a formal approach towards transformation with reference to Peter Eisenman's dissertation *Formal Basis of Modern Architecture*, the terms generic and specific form are introduced. The main assumption of formal transformation is that any specific form can be traced back to its generic antecedent. Defining the main properties of generic form as volume, movement, mass, and surface, the thesis moves towards a textual approach. The knowledge generated through textual-transformation is classified as subjective, particular, and relative. Referring to Eisenman's analysis of the Casa del Fascio in *Giuseppe Terragni: Transformations, Decompositions, Critiques*, main indicators of the textual-transformational model are defined as notation, corner, datum, entry, and alphabetical sequence.

In Chapter 5, the textual-decompositional model is introduced as another form of textual reading. Textual decomposition is defined as the contrapositive of classical or formal composition with reference to Eisenman's "Futility of Objects: Decomposition and the Processes of Difference". Textual-decomposition is categorized into three modes: pre-composition in which the final form is restored to an ideal state by addition and subtraction, composite in which the final form is restored to an ideal state by superimposition of two simple types, and the extra-compositional in which the final form cannot be restored to a symmetrical state but rather a successive and unfinished state. Main indicators of the textual-transformational model are defined as marking, disjunction, data, entry, and alphabetical sequence with reference to Eisenman's analysis of the Casa Giuliani-Frigerio in *Giuseppe Terragni: Transformations, Decompositions, Critiques*.

In Chapter 6, an overview and comparison of these three models are made. Then, on the basis of the epistemological and methodological aspects introduced by these three models, textual reading is defined as a generative act in that it can be utilized to generate new knowledge as well as new form. Defining the precedent as a catalyst for invention rather than a barrier against it, the educational implications of textual reading is discussed.

Chapter 7 concludes with general remarks and implications for future research.

CHAPTER 2

RECONCEPTUALIZING THE ARCHITECTURAL PRECEDENT

This chapter aims at reconceptualizing the architectural precedent. To do so, the study first makes an introduction to the general use of the concept of precedent by referring to its use in the discipline of law and in the discipline of architecture. Then, it redefines the concept of architectural precedent as a trans-historical term. In this sense, the study introduces the epistemological and methodological aspects according to which the architectural precedent can be reconceptualized. The section on epistemological aspects introduces the notions of textualism and pragmatism as well as the pioneers of these views. In doing so, the study makes a differentiation between formal and textual reading and introduces the concept of creative misreading. The section on methodological aspects introduces the fundamentals of textual reading.

2.1 Introduction to the Concept of Precedent

This section of the study aims to reconceptualize the “architectural precedent” as a “trans-historical” term. In this sense, the first part of this section makes an introduction into the concept of precedent as it is used within the discipline of law. In doing so, the thesis briefly discusses two views related with the “judicial precedent”: while one considers the precedent as a binding constraint, the other considers the precedent as an application of analogical reasoning. The second part, elaborates on the concept of architectural precedent in relation to John E. Hancock’s theory of precedent. The third part discusses the different approaches to the architectural precedent and the concept of misprision and creative misreading.

2.1.1 Precedent in Law

Precedent in law refers to “a judicial decision, which constitutes an authoritative example or rule for subsequent analogous cases; a form of a document which has been found valid or useful in the past and can be copied or adapted.”²⁵ It is, in this sense, both a reference for decision making and a source of law. In some countries judicial precedent and practice have a more significant role in defining the laws. In these countries “creative work of legal norms rests not only with legislative, but also with judicial bodies”.²⁶ In “Sources of Law: Judicial Precedent” Lupu Raluca argues that in these countries the precedent is not a reference for making decision but also doing law:

Anglo-Saxon legal system (common law) jurisprudence is recognized as source of law. Common law consists of legal judgments and customs. Judicial precedent has an important role, and the judge is not simple interpreter of the law, but a law maker. A case can be solved on the basis of precedent pronounced hundreds of years before.²⁷

In this sense, the precedent is not only a binding prior condition to be applied according to its relevance, but also an example, which constitutes a reference for legislation.

In “Why Precedent in Law (And Elsewhere) Is Not Totally (Or Even Substantially) about Analogy”, Frederick Schauer argues that precedent-bound decision making does not involve analogical reasoning but adherence to some prior conditions:

[T]he legal principle of precedent requires that a prior decision be treated as binding even if the current decision maker disagrees with that decision. When the identity between a prior decision and the current question is obvious and inescapable, precedent thus imposes a constraint different from the effect of a typical argument by analogy.²⁸

²⁵ Weedle and Neveu, “Introduction: Beyond Precedent,” 7.

²⁶ Lupu Raluca, “Sources of Law: Judicial Precedent,” *Contemporary Readings in Law and Social Justice* 5 (2013): 375

²⁷ Ibid.

²⁸ Frederick Schauer, “Why Precedent in Law (and Elsewhere) is Not Totally (or Even Substantially) About Analogy,” *Perspectives on Psychological Science* 3 no.6 (2008): 454.

Such obligation to adhere to a precedent introduces a constraint for the decision maker, regardless of their own view.

Although precedents determine the judicial decisions in a binding way, it should be pointed out that the precedents are open to interpretation with reference to specific conditions. Such idea of interpretation is significant in terms of understanding the methodological and epistemological aspects of the concept of precedent as it is used in the practice of law. Schauer argues that the judicial precedent is not as objective as it may seem, therefore it should not be considered as an absolute truth:

Looking at precedent only as a backward-looking constraint may produce a distorted preoccupation with the canonical statement of previous decision makers. The precedents of the past, especially judicial precedents, come neatly packaged, with selected facts and authoritative language. Dealing with the use of past precedents thus requires dealing with the presence of the previous decision maker's words [...] So long as the words of the past tell us how to view the deeds of the past, it remains difficult to isolate how much of the effect of a past decision is attributable to what a past court has done rather than to what it has said.²⁹

It will be seen in the following sections that, such critique of seeing the precedent as a backward-looking constraint and neatly packaged examples of the past is very similar to the discussions on the precedent in architecture. Another significant aspect of the knowledge of the precedent in law is that it corresponds to the category of practical knowledge rather than theoretical or historical knowledge.

2.1.2 Precedent in Architecture

In "Between History and Tradition: Notes Toward a Theory of Precedent" John E. Hancock, defines the concept of precedent as a "constructive way of exploring the territory between tradition and history."³⁰ To differentiate between tradition and

²⁹ Frederick Schauer, "Precedent," *Stanford Law Review* 39 no.3 (1987): 573

history bound architecture, Hancock gives two examples from Acropolis in Athens; the Parthenon and the Erechtheum:

The Parthenon can be regarded as the climax of at least four hundred years of tradition-bound evolution, in which the peristylar Doric temple had undergone a steady progression of refinements. The designer's knowledge of diverse or distant precedents was small, and in any case the few closely related variables of the Doric formula were imbued by the culture at large with durable sacred content, which it was neither conceptually possible nor functionally necessary to violate.³¹

In this sense, Hancock considers the Parthenon as an example of tradition-bound architecture because it somehow displays the “cultural inertia of the sacred temple type”.³² The idea of a sacred temple type, which has emerged and evolved within the tradition is similar to vernacular settlements. The sacred temple type and the vernacular settlements can be called tradition-bound rather than history-bound because they sustain their existence through the present.

According to Hancock, the Erechtheum on the other hand, exemplifies history-bound architecture:

The Erechtheum, by contrast, reveals evidence of a flexibility of mind akin to the contemporaneous opening up of historical consciousness. Such a shift in attitude, which many scholars associate with Herodotus, may well have helped the architect free himself from the singular semiclosed chain of immediate tradition. Consequently he could produce a building, not so much decadent in its deviation from the type (as some historians have called it) as brilliant in its openly eclectic innovation toward the resolution of arduous constraints.³³

Different from tradition-bound architecture, history-bound architecture involves the possibility of selection from the past rather than an obligation to follow a certain tradition.

³⁰ John E. Hancock, “Between History and Tradition: Notes Toward a Theory of Precedent”, *The Harvard Architecture Review* 5 (1986): 65.

³¹ Ibid.

³² Ibid.

³³ Ibid.

According to Hancock, the theory of precedent has two aspects: convincing limits – “the capacity to appropriately select only portions of the past according to the needs of a current task”- and rigorous methods- “the techniques to thoroughly analyze that, which is selected in order to use it more efficiently.”³⁴ In Hancock’s theory, “choice” corresponds to situation-based selectivity while “method” corresponds to knowledge-based criticism. Hancock defines three criteria for selection –“place, type, and principle”, and three methods for exploring precedents –“analytical, experiential, and transformational”.³⁵ The criteria for selection indicate where the precedent is grounded: whether place-grounded, type-grounded, or principle grounded.

The common property of these three categories is that they all indicate “continuity” and “coherence” in a certain aspect of precedent. When we speak of a place-grounded precedent, it denotes continuity and coherency of setting, which corresponds to the idea of contextualism in general. That is to say, identifiable properties of the precedent are associated with the place in which it is located. When we speak of a type-grounded precedent, it denotes a collection of several examples of a type which can be abstracted into generic diagrams which reveal their typicality. Different from a place-grounded precedent, the type-grounded precedent is based on the continuity of institutional heritage. When we speak of principle-grounded precedent, it denotes the insight and techniques through which an architectural language is produced. The idiom “form follows function” may be considered as such a precedent which is principle-grounded rather than place and type.³⁶ The aspect in which the precedent is grounded also defines the criteria for selection.

Hancock also defines these three categories as precedent by accumulation, precedent by analogy, and precedent by application:

³⁴ Ibid., 67.

³⁵ Ibid., 70- 73.

³⁶ Ibid.

Restating these three realms of choice (place, type, and principle) in more general terms, we could refer to them, respectively, as: precedent by accumulation, where prior work constitutes the necessary background in a line of continuing development, and to which new work is attached in direct proximity (as experimental science extends lines of previous investigation); precedent by analogy, where prior work reveals the previous solutions for similar problems, which new work resembles in overall organization (as music and literature rely on forms and genres to aid in organization and comprehensibility); and precedent by application, where prior work is the durable embodiment of the appropriate effectiveness of rules, techniques, or ideas, from which new work reuses or adapts general precepts within new situations (as the law maintains its operative equivalent of judicial “truth”).³⁷

Keeping Hancock’s criteria for selection in mind, it should be emphasized that this thesis has no ambition for making generalizations about precedents with reference to place, type, or principle.

Hancock’s theory also has a methodological dimension. According to Hancock a work of architecture can be understood via analytical, experiential or transformational methods. While the analytical methods indicate “rational comprehension of the building’s abstract organization: space, volume, hierarchy, zones, plan-configurations, and façade-compositions”, the experiential methods indicate “qualitative description of the building’s sensual or meaningful presence: the effects of texture, material, color, ornament, symbolism, atmosphere, and acoustics”.³⁸ The transformational method, however, indicates “critical and hypothetical deconstruction of the artifact through its representation as an autonomous text”.³⁹

Hancock argues that discovering the original intentions of the architect is a significant issue in analytical and experiential methods, whereas it is not an issue in the transformational method. The aim of the transformational method, according to

³⁷ Ibid., 72.

³⁸ Ibid., 73.

³⁹ Ibid., 74.

Hancock, is to produce “a new artefact of autonomous validity” rather than discovering an existing situation. To do so the designer utilizes certain exploratory techniques:

The designer begins with a facsimile of some kind, like a plan, and passes it through his own reading and misreading, using a series of operations suggested by terms such as reversal, slippage, scattering, extension, replication, interlock, density, double-scaling, and intertextuality. This produces a series of drawings, or other texts, which become a search for all the formal, thematic, and critical possibilities of the precedent’s material. The value of such work is mainly engendering a spirit of constructive play in the designer and the process, to enable the new work to finally escape the usually impressive weight of the precedent’s direct organizational coherence and experiential force. It suggests ways of extending new work beyond precedents, though in ways that may still reestablish a resonance with it of a perhaps unexpected kind.⁴⁰

It is this idea of reading or intentional misreading which is significant in terms of this thesis. However this thesis prefers the term textual instead of transformational, and considers the transformational method as one form of textual reading. In this sense the analytical method as defined by Hancock is similar but also different from the use of the term in this thesis. In order to prevent a misconception the terms analytical and transformational are accompanied by the term textual in this thesis, such as textual-analytical and textual-transformational model.

2.2 Reconceptualizing the Precedent as a Trans-historical Term

This part focuses on the difference between how an architect and architectural historian approach the concept of precedent. This thesis argues that there is both a methodological and epistemological difference between the two approaches. The methodological distinction lies in that, while the architectural historian investigates the precedent through rigorous methods in a way to understand why and how a certain artifact is the way it is, the architect investigates it to generate practical knowledge.⁴¹

⁴⁰ Ibid., 75.

⁴¹ Peter Eisenman, *Feints* (Milan: Skira, 2006), 66.

The epistemological distinction is related with the truth value of the knowledge derived from the architectural precedent, and it is directly related with the different methodologies used. Since the architect has no concern of scientific rigor, the knowledge derived from the precedent does not necessarily have a truth claim. The knowledge of the precedent as acquired by the architect is subjective, personal, and experiential.

In “Misprision of Precedent: Design as Creative Misreading,” David Rifkind argues that American literary critique Harold Bloom’s concept of “misprision” as a form of creative misreading offers valuable insights into the way architects critically engage with the works of their predecessors.⁴² According to Rifkind creative misreading “enables the study of historical precedent to escape the trap of treating history as an encyclopedia of solutions to problems defined by programs, sites, cultural contexts, and aesthetic preferences” by approaching history “through an open-ended process of interpretation and criticism.”⁴³ In this sense, creative misreading of sources expands the conventional understanding of precedent analysis because it asserts that “precedents serve as multivalent sources of knowledge, rather than through the more instrumentalized and constrained process of treating precedents as models of programmatic problem-solving”.⁴⁴ This study appreciates Rifkind’s contribution to the theory of precedent, and uses it as a departure point for reconceptualizing the architectural precedent as a trans-historical term.

2.2.1 Epistemological Aspects

The conventional method of precedent studies based on careful analysis of plan and elevation drawings first appeared in Vitruvius’ *De Architectura*, where he makes

⁴² David Rifkind, “Misprision of Precedent: Design as Creative Misreading” *Journal of Architectural Education* 64, no. 2 (2011):72.

⁴³ Ibid., 67. Emphasis added.

⁴⁴ Ibid. Emphasis added.

comparative analyses of several types of roman structures (i.e. temples, forums, theatres) for the sake of making typological classifications based on geometry and function.⁴⁵ This method of analysis, as used by Vitruvius, is a way of decoding what lies beneath the precedent. It is based on the foundationalist assumption that truth is an accurate representation of a reality, which is called the correspondence theory of truth. Thus, beneath the precedent lies a single truth to be discovered, a single meaning to be derived from geometrical relations and proportions, which are based on the univocal language of mathematics. Similar use of such a method can be exemplified by the “shape grammar analysis of the Villa Malcontenta”⁴⁶ and Colin Rowe’s comparison of the Villa Malcontenta and the Villa Stein in his *The Mathematics of the Ideal Villa*.⁴⁷ Such method allows only a single reading of the precedent because the mathematical symbols and geometrical relations have constant connotations.

According to Eisenman, if architects are to be critical and creative, they should perform different forms of precedent analysis; in other words, develop “new ways of reading”.⁴⁸ In his book *Feints*, Eisenman describes the process of precedent analysis as it is employed by an architectural historian:

In the history of architecture, analysis usually begins from the geometrical- that is, *from those things that you can touch and define metaphysically*, like structure, walls, etc. and then moves to a spatial analysis, which deals with that which is contained within physical boundaries. The movement between object, or geometry, and space defines the history of architecture.⁴⁹

⁴⁵ Vitruvius, *Mimarlık Üzerine On Kitap* translated by Suna Güven (İstanbul: YEM Yayın, 1998).

⁴⁶ See G. Stiny and W. Mitchell “The Palladian grammar,” *Environment and Planning B: Planning and Design* 5 (1978): 5-18.

⁴⁷ See Colin Rowe, *The Mathematics of the Ideal Villa, and Other Essays*. Cambridge: The MIT Press, 1976.

⁴⁸ Kathleen M. Wheeler, “Derrida, Textuality, and Criticism” in *Romanticism, Pragmatism and Deconstruction* (Oxford: Blackwell, 1993), 217.

⁴⁹ Eisenman, *Feints*, 66. Emphasis added.

Similarly in his PhD dissertation *The Formal Basis of Modern Architecture*, Eisenman states that his approach towards the “precedent is not historical, but critical”.⁵⁰ According to Eisenman, while not all formal manipulations can be called critical, it is questionable “whether an architecture can be critical without formal manipulations”.⁵¹

Besides the formal analysis, Eisenman performs a textual analysis on precedents. According to Eisenman, precedents can be read textually by privileging either the functional, structural, social or aesthetic aspect. However, while all architecture can be read textually -meaning that no architecture is more open to textual reading than any other- “certain conditions of architecture are particularly open to textual readings that displace canonical interpretations through the use of primarily formal discourse, defined within the parameters of a historical period”.⁵² Such reading displaces the conventional notion of reading, rendering the “displacement” critical:

Giuseppe Terragni’s Casa del Fascio and Casa Giuliani Frigerio can be called examples of critical architectural texts in that the meaning of their facades, plans, and sections can be read as *displacements from an architecture of origin, hierarchy, unity, sequence, progression, and continuity* to one of fragmentation, disjunction, contingency, alternation, slippage, and oscillation.⁵³

Eisenman’s effort to make textual analysis of architecture and precedents stems from his admiration of Derridean deconstruction and the metaphysics of presence, which Derrida himself borrowed from Martin Heidegger.⁵⁴

According to Heidegger and Derrida, Western philosophy has always emphasized the desire for absolute meaning, and prioritized one term from the dichotomies; such as

⁵⁰ Peter Eisenman, *Giuseppe Terragni: Transformations, Decompositions, Critiques* (New York: Monacelli Press, 2003).

⁵¹ Eisenman, *Feints*, 74.

⁵² Ibid.

⁵³ Ibid. Emphasis added.

⁵⁴ Lecture notes, Arch 626: Issues in Architectural Research instructed by Prof. Dr. Zeynep Mennan, spring 2011 Middle East Technical University, Ankara.

presence over absence, speech over writing, theory over practice, reading over misreading. Eisenman states that “it is precisely the questioning of presence that has made Derrida’s work important for architecture. Since the late 1970s, the question of metaphysics of presence and the hegemony of visual have been central to my work”.⁵⁵ He refers to Derrida’s metaphysics of presence in order to differentiate between formal and textual analyses:

The fundamental difference between a formal analysis and a textual analysis in architecture lies in the idea of the metaphysics of presence. Formal analysis assumes as a truth the premise that architecture is the locus of the metaphysics of presence, while a textual analysis begins to *question this assumption*, going beyond the dialectics form/function, figure/ground, public/private, which are grounded in such a metaphysics.⁵⁶

So, it can be said that Eisenman associates the conventional method of formal analysis with foundationalism, whereas he associates textual analysis with anti-foundationalism.

Another parallelism between Eisenman and Derrida is their conception of truth. According to Derrida the obsession for grounding should be abandoned since there is no transparent link between science and its references, no shared world, no outside reality, no absolute or objective truth independent of language. That is to say everything is situated in language, constructed in and by language. There is nothing outside or before the text, therefore, everything is in need of interpretation.⁵⁷ Eisenman’s textual analysis has similar implications:

A formal analysis pretends to begin from an internal logic that is linear and narrative, beginning from an initial idea or diagram. Textual analysis suspends narrative and hierarchy. In a text, *there is not one truth but many truths*; not one diagram, but a series of diagrams. A formal analysis is basically a narrative; a text is a tissue of traces that

⁵⁵ Eisenman, *Feints*, 203.

⁵⁶ Ibid, 67. Emphasis added.

⁵⁷ Lecture notes, Arch 626: Issues in Architectural Research instructed by Prof. Dr. Zeynep Mennan, spring 2011 Middle East Technical University, Ankara.

denies narrative. [...] A textual analysis attempts to look at material without saying there is any particular truth, or any particular value, to one thread more than the other.⁵⁸

So, the textual analysis of the precedent is not about deciphering the knowledge lying beneath the precedent. It is about the generation of knowledge through endless interpretation. That is to say, the *knowledge of the precedent is made rather than found*. Likewise, the precedent is not the representation of an outside reality. Knowledge generated by the textual analysis is not absolute but subjective and not universal but particular.

According to Derrida, there is no correct interpretation of a text since the relationship between the signified and the signifier is never constant.⁵⁹ Due to this problematic relationship, language is full of misunderstanding and failure. There are no stable meanings but a constant shift of meanings.⁶⁰ At this point Derridean deconstruction differs from Gadamerian hermeneutics: while according to Gadamer there is hope for agreement and “fusion of horizons” through conversation, for Derrida there is no hope for agreement or understanding. Richard Rorty differentiates between these two approaches by introducing the terms “strong textualist” and “weak textualist” respectively: a weak textualist as one who “thinks that each work has its own vocabulary, its own secret code” to be discovered, and strong textualist as one who “has his own vocabulary and doesn’t worry about whether anybody shares it”.⁶¹ The impossibility of stabilizing meaning, as mentioned by Derrida and the strong textualists, also holds for Eisenman’s textual analysis of the precedent.

⁵⁸ Eisenman, *Feints*, 67. Emphasis added.

⁵⁹ Wheeler, “Derrida, Textuality, and Criticism,” 211-212.

⁶⁰ Kathleen M. Wheeler, “Jacques Derrida: Deconstructing Metaphysics” in *Romanticism, Pragmatism and Deconstruction* (Oxford: Blackwell, 1993), 132.

⁶¹ Richard Rorty, “Nineteenth Century Idealism and Twentieth Century Textualism” in *Consequences of Pragmatism: Essays 1972-1980* (New York: Harvester, 1991), 152.

The fact that there are no stable meanings and no possibility of agreement renders “misreadings” inevitable, a term widely used by strong textualists. However, according to Derrida, it is not the reader but the language that accounts for misreading; “since it is the nature of language as superabundant that it leads to misreading”.⁶² Here misreading does not have a negative meaning and it does not denote a wrong interpretation; rather in Derrida’s words “every text is said to contain within itself the insight necessary to *free readers of their blind misconstructions* of it. Or rather, the text is a writerly enactment of potential ‘readerly’ misreading of it”.⁶³ Unloosening the concept of meaning, deconstruction privileges “the idea of misreading over reading” by reversing the hierarchy. Another figure, who welcomes misreading, is Paul de Man, stating that “texts are allegories of misreading, that is, that they tell the story of their misunderstandings.”⁶⁴ In this sense, Eisenman’s reading of the precedents can also be considered as a form of misreading, because he analyzes these precedents independent from the intentions of their architects and does not seek to discover already existing meanings underlying the precedents.

Although there are many parallelisms between Eisenman’s discussions and Derridean deconstruction, Eisenman’s way of misreading precedents can be associated with “American pragmatism” as well.⁶⁵ There are several reasons for this account. Firstly, Derrida’s free play of text does not serve for an end, whereas Eisenman’s misreading of the precedents does. Eisenman instrumentalizes the architectural language in order to misread the precedents. In this sense his approach appears to be closer to pragmatism

⁶² Wheeler, “Derrida, Textuality, and Criticism”, 224.

⁶³ Ibid., 227. Emphasis added.

⁶⁴ Ibid., 227.

⁶⁵ Pragmatism is a philosophical tradition holding the view that the truth value of any idea is determined by the function of its practical outcome. Though pragmatism denotes reference to the “practical” in common sense, the term American pragmatism refers to the philosophical tradition which originated in United States in 1870s. Pioneer figures in American pragmatism are Charles Sanders Peirce, William James, John Dewey and Richard Rorty. The revised form of American pragmatism conceptualized by Rorty is also called neopragmatism.

than deconstruction. Secondly, Eisenman also instrumentalizes the precedents by misreading, utilizing them in his project research. Finally, Derrida prefers to use the term “free play of text” and *écriture* instead of reading or misreading:

Derrida was not only obviously interested in judging readings or misreading as strong or weak; he was patently interested in playing with the text. No misreading is acontextually stronger or weaker than the other, because they are all equally shot through with logocentric contradictions. *Misreading has to some extent become a superficially more acceptable term for making meanings, and it hardly relates to Derrida's concept of free play anymore.* Misreading implies a summation, reduction, and account, at some point, of the text. Derrida knew that any account at any point would be equally inadequate without a specified context. He never offered misreading or accounts, whether strong or weak, but only *écriture*.⁶⁶

In “Deep Structure to an Architecture in Suspense: Peter Eisenman, Structuralism, and Deconstruction” Thomas Patin argues that misreading has become the main project in Eisenman’s career, “[a]n explicit dependence on misreading and fiction acknowledges itself as the absence of a singular architectural essence”.⁶⁷ In “Subject-Object-Complement: Brief Chronicle of an Unexpected Architecture” Silvio Cassarà also refers to American pragmatism in his attempt to situate Eisenman’s approach, and states that “Eisenman was seeking destabilisation, heresy and transposition on the construction in a positivist vein of this total philosophical system capable of linking American pragmatism with European idealities”.⁶⁸

At this point it will be beneficial to note that the concept of creative misreading does not belong to Derrida but to American literary critic Harold Bloom, who in his book *The Anxiety of Influence: A Theory of Poetry* defined the term with reference to poetic influence among poets.⁶⁹ According to Bloom, who is considered by Rorty as a strong

⁶⁶ Ibid., 236. Emphasis added.

⁶⁷ Thomas Patin, “From Deep Structure to an Architecture in Suspense: Peter Eisenman, Structuralism, and Deconstruction,” *Journal of Architectural Education* 47, no.2 (1993): 93.

⁶⁸ Silvio Cassarà, “Subject-Object-Complement: Brief Chronicle of an Unexpected Architecture” in *Feints* by Peter Eisenman (Milan:Skira, 2006), 10.

textualist and pragmatist⁷⁰, during strong misreading “the critic asks neither the author nor the text about their intentions but simply beats the text into a shape, which will serve his own purpose. He makes the text refer to whatever is relevant to that purpose”.⁷¹ Bloom’s theory of poetic influence exemplifies weak theory in that his claims are not empirically justifiable:

Poetic influence – when it involves two strong, authentic poets, - always proceeds by a misreading of the prior poet, as an act of *creative correction* that is actually and necessarily a *misinterpretation*. The history of fruitful poetic influence, which is to say the main tradition of Western poetry since the Renaissance, is a history of anxiety and self-saving caricature, of distortion, of perverse, willful revisionism without which modern poetry as such could not exist.⁷²

Such reading of the poet is akin to Eisenman’s misreading of the Casa del Fascio and the Casa Giuliani Frigerio independent from Terragni’s intentions. What is important for Eisenman is to develop a language of architecture, which he can also utilize in his future projects. He is not after finding the “right”, but he is after finding the “useful”. Such notion of being useful also determines the “selection of precedents”.

In “Misprision of Precedent: Design as Creative Misreading,” Rifkind tries to construct certain relationships between well-known architectural precedents referring to Bloom’s theory of poetic influence. An example given by Rifkind is creative misreading of the Acropolis, the Villa Savoye, and Bernard Tschumi’s Acropolis Museum in Athens through the concept *promenade architectural*. Here the *promenade architectural* is instrumentalized in pragmatist terms in order to relate architectural precedents. Rifkind defines a similar relationship between Eisenman and Terragni, saying that the influence of the Casa del Fascio and the Casa Giuliani Frigerio as

⁶⁹ Harold Bloom, *The Anxiety of Influence: A Theory of Poetry* first published in 1973 (New York: Oxford University, 1997).

⁷⁰ Rorty, “Nineteenth Century Idealism and Twentieth Century Textualism”, 158.

⁷¹ Ibid., 151.

⁷² Bloom, *The Anxiety of Influence: A Theory of Poetry*, 30. Emphasis added.

analyzed by Eisenman can be followed in his own projects: “Terragni never diagrammed the formal shifts and displacements discovered in his work by Eisenman, the buildings in Como could be read as referring only to themselves with the kind of autonomy Eisenman claimed for House II”.⁷³

It should be noted here that creative misreading through analogy and poetic influence as such, changes *the status of precedent from a code to be deciphered to a source to be interpreted*; a situation which signals the shift from a foundationalist view of precedent to an anti-foundationalist one. Rifkind defines creative misreading as “the expressive mode of a discipline constantly examining its own heritage,” heritage that serve as a fruitful source for the generation of new knowledge.⁷⁴ Likewise, Eisenman considers the misreading of the architectural precedent a prerequisite of invention:

Formal displacements, articulations, and experimentation can be posited as critical in this regard, in that they do not assume that the condition of an architectural language is objectively given but rather that it constitutes a series of unarticulated repressions. Dominant among these is the idea of *historical precedent and stable and transcendental origins*. The formal can be critical precisely because it operates on the borders of *historical precedent*. While all architecture engages formal components, the formal is potentially critical when it participates in the *invention-* or *reinvention-* of disciplinary languages not simply for the sake of invention alone but as an analytical commentary on disciplinary precedents.⁷⁵

Such misreading of the precedent does not necessarily make the architect less original, but critical. In this sense misreading of the precedent can be defined as a close reading, which performs imaginative transformation.

Rifkind argues that creative misreading “enables the study of historical precedent to escape the trap of treating history as an encyclopedia of solutions to problems defined

⁷³ Rifkind, 72.

⁷⁴ Ibid., 74.

⁷⁵ Eisenman, *Feints*, 74. Emphasis added.

by programs, sites, cultural contexts, and esthetic preferences” by approaching history “through an open-ended process of interpretation and criticism.”⁷⁶ In this sense creative misreading of sources expands the conventional understanding of precedent analysis because it asserts that “precedents serve as multivalent sources of knowledge, rather than through the more instrumentalized and constrained process of treating precedents as models of programmatic problem solving”.⁷⁷ Not only does such a process of creative misreading of the precedent contribute to the generation of knowledge, but it also implies the development of “anti-methodical methods”⁷⁸ for architectural design and pedagogy:

Architects and historians engage architectural history differently. Yet while historians frequently discuss historiographic methodologies and architects have developed standardized analytical processes that emphasize program, site, and spatial organization, neither fully accounts for the processes of creative misreading through which so many architects have grappled with the work of others in order to generate new knowledge and critically engage precedents. Examining these processes enriches both design criticism and design pedagogy.⁷⁹

So, this is what differentiates misreading from the conventional mode of precedent analysis.

Though the misreading of precedent provides a fruitful area for experience and invention, it has certain limitations, which should be kept in mind. One of these limitations is that it treats history as a pragmatic instrument. To quote Rifkind:

As both a heuristic and hermeneutic stance, misprision [creative misreading] must be approached with caveats. One limitation of this theory is that it treats history as a mine from which to draw forth nuggets useful to the present. This instrumentality creates a form of operative criticism in which examples are sought and analyzed in terms of their

⁷⁶ Rifkind, “Misprision of Precedent: Design as Creative Misreading”, 67. Emphasis added.

⁷⁷ Ibid. Emphasis added.

⁷⁸ Wheeler, “Derrida, Textuality, and Criticism”, 209.

⁷⁹ Rifkind, “Misprision of Precedent: Design as Creative Misreading”, 64.

utility to contemporary concerns, potentially limiting the range of both subjects and interpretations.⁸⁰

That is to say, such misreading and instrumentalization of history and the precedent will have to face with the same criticism that is directed towards textualism and pragmatism. This criticism is not about the truth value of the knowledge derived from the precedent (epistemological) but about the process of misreading borrowed from the textualists (moral). The criticism against the misreaders is that literary criticism faces the danger to turn into a field where the authors of the texts are eliminated in a way to lay down any grid one pleases in the hope of getting creative or interesting misreading. Rorty calls this critique as the “moral objection to textualism”.⁸¹ However, such critique towards misreading in terms of precedent analysis may well be valid for all forms of precedent analysis, since precedent-based design dwells on the processes of borrowing, adaptation, and reuse. That is to say, each architect first decontextualises precedents or precedent components and then recontextualises them in a way to solve different design problems. This study argues that, it is not possible to repeat any design process as it is, therefore any application of precedent-based design is inherently a form of misreading.

The second limitation of creative misreading mentioned by Rifkind is that it may result in eclecticism:

Another threat that hangs over misprision [creative misreading] is the potential lapse into eclecticism. However, misprision is more than simple borrowing. Reference is not the same as quotation, and transformation should not be confused with transcription. The intra-poetic relationships described by the swerve between precursors and successors result from a critical process of interpretation. This is the criteria for originality in misreading and this is what it differentiates it from conventional modes of reading precedents.⁸²

⁸⁰ Ibid., 73. Emphasis added.

⁸¹ Rorty, 156-158.

⁸² Rifkind, “Misprision of Precedent: Design as Creative Misreading”, 74.

However, this potential lapse into eclecticism is not related with the epistemological aspect of misreading but its pedagogical and methodological aspects. To clarify, such eclecticism relates to precedent-based learning and precedent-based design but not to knowledge production. In terms of knowledge production creative misreading has great potential when compared to the conventional method of precedent analysis. According to Rifkind “[t]he conventional method may well serve for pragmatic purposes of learning and design but fails to generate new knowledge since it aims at discovering already existing reality coded in precedents, whether they are historical or contemporary precedents”.⁸³

2.2.2 Methodological Aspects

Dwelling on the epistemological framework developed in the previous section, this thesis holds the view that it is not possible to speak of a single totalitarian method of misreading, which can be applied to every building. Since knowledge of precedent is reconceptualized as “multiple” and “subjective”, it cannot be acquired or applied via rigorous methods. Therefore, this thesis argues that, one of the main objectives should be to develop models that can be referred to in accordance with their relevance to specific conditions.⁸⁴ To do so, this thesis determines the fundamentals of the process of textual reading: denial of causality, contextuality, historicity, intentionality, and diagnosticity. These fundamentals of textual reading also mark its difference from formal reading.

⁸³ Ibid.

⁸⁴ For the terms “rigor” and “relevance” see Schön, *The Reflective Practitioner: How Professionals Think in Action*.

2.2.2.1 Causality

Causality can be defined as the relationship between a set of factors -the cause- and a phenomenon -the effect-. It can also be defined as a relation between a first event and a second event in which the second event takes place chronologically later. According to both definitions, the effect chronologically succeeds the cause and the cause directly influences the effect. That is to say there is no other intervening factor which disrupts the relationship between the cause and the effect. Causality denotes the fact that everything that happens can be attributed to a specific reason. Since there is an absolute relationship between the cause and the effect, repetition of a certain cause is assumed to result in the same effect in all instances. This assumption constitutes one of the fundamentals of inductive reasoning; therefore it is used extensively in positivist sciences.

One basic property of textual reading is that it denies causality. It does not assume that specific form is a result of a certain cause. That is to say, how a building can be read depends on its own internal history. In relation to Terragni's Casa del Fascio and Casa Giuliani-Frigerio Eisenman argues:

This methodology emphasizes not only that meaning cannot always be rationalized as the effect of linear development and causality but that these two buildings of Terragni in particular cannot be explained solely by formal, aesthetic, and functional typologies or conceptual analyses. The analytical framework through which the two buildings are read is instead at least partially *determined by the specific nature of the buildings themselves and the theoretical standpoint from which they are addressed*.⁸⁵

Textual relationships are complex, thus they cannot be reduced to linear thought of cause and effect. In this sense, this thesis argues that the textual reading of precedent neither seeks nor suggests a causal link between an initial idea and the final form as well as function and form or intent and form. While a formal reading may suggest such causal link, the epistemological nature of textual reading denies it.

⁸⁵ Eisenman, *Giuseppe Terragni: Transformations, Decompositions, Critiques*, 10. Emphasis added.

2.2.2.2 Contextuality

Context in architecture can be defined as the setting in which a specific form is located. Context can be historical, political, social, or/and physical. The formulation of this thesis differs from Hancock's theory in that it does not accept place-bound precedent as a matter of concern for textual reading. Rather, each specific form is considered as autonomous just like the text. Therefore, this thesis argues that, in order to reveal the internal history of a specific form, it should be isolated from its historical, political, social, and physical context. What makes Eisenman's study challenging in this sense is the selection of cases. Both the Casa del Fascio and the Casa Giuliani-Frigerio belong to the fascist period in Italy and are usually classified as examples of Italian rationalism. That is to say, they are both historically, politically and aesthetically loaded with connotations that are independent from and outside architecture. Therefore, Eisenman eliminates the context in which these buildings are situated for the sake of revealing the form's autonomy. In his words:

I have erected a second scaffolding around Terragni's, an analytical one that distances the object of scrutiny from the kind of conventional approach that seeks to place the object in a purportedly coherent historical context, which is maintained as truth.⁸⁶

In this sense this thesis argues that textual reading denies contextuality of precedent, that is to say that a specific form is situated in a coherent context which can be analyzed and understood by using rigorous methods. Contextuality may be a concern of formal reading but not textual.

2.2.2.3 Historicity

It is already discussed in Hancock's theory that a precedent is related with the knowledge of the past. In Hancock's words:

The works of the past always influence us, whether or not we care to admit it, or to structure an understanding of how that influence occurs.

⁸⁶ Ibid.

The past is not just which we know, it is that what we use in a variety of ways, in the making of new work.⁸⁷

Despite this assumption, it can be argued that a precedent is not necessarily historicist. In this sense, textual reading requires the precedent to be defined as a trans-historical term. In order to do so the precedent should be separated from its chronological references. A similar attitude can be seen in Colin Rowe's "Mathematics of the Ideal Villa", where he compares Andrea Palladio's Villa Malcontenta, which dates back to 1550-1560 with Le Corbusier's Villa Stein at Garches, which dates 1927. This thesis argues that textual reading denies the notion that a precedent is historically situated. Rather it is trans-historical and operates beyond the borders of history.

2.2.2.4 Intentionality

Another aspect which textual reading denies is intentionality, since intentionality assumes a causal link between the architect's intention and the final form. If there were such a causal link, this would mean that there was a single truth to be derived out of a precedent. The idea of a single truth confronts with the epistemological aspects discussed in the previous section. What an architect thinks about his/her building or the process through which s/he passed, may not account for every attribute of form: there may be either pre or post-rationalization. In this sense, it is not possible to develop a theory of precedent as reconceptualized in this thesis that counts on intentionality. Therefore, another postulation of this thesis is that any work of architecture should be read independent from the intentions of its architect. Thus, models of textual reading applied here can be considered as forms of misreading.

⁸⁷ Hancock, 65.

2.2.2.5 Diagnosticity

The final aspect of textual reading is that it is not diagnostic. It does not aim or intend to classify or label precedents according to function, context, style, date or any other variable. Rather it aims to generate new knowledge. In this sense, textual reading is a creative and generative process rather than merely analytical. For example, Doric, Ionic, and Corinthian columns can easily be differentiated from each other according to their formal aspects such as their bases, capitals, motives and proportions. These formal aspects are the distinguishing features of these columns according to which the type of classical order can be determined. Such formal analysis is therefore diagnostic. However, in textual reading a column only indicates the traces of the process of making. While the Doric column has a fixed meaning in formal reading, it does not have a fixed meaning in textual reading. In this sense, textual reading of precedent is not diagnostic.

Since the method of reading is determined by the specific nature of the built form, this study argues that it is not possible develop a single method for reading all buildings but only particular models to which one can refer to according to its relevance. Although the concept of creative misreading as it is discussed in the previous section suggests an alternative way of reading precedents and producing knowledge, it is not possible to transform it into a method because the concept rejects methodologism. Therefore, it can be argued that, creative misreading saves the precedent from the slavery of methodologism, which is imposed by conventional modes of analysis.

2.3 Developing Models for Textual Reading

It has already been argued in this chapter that each building has its own internal history, which is specific to its process of making. Therefore, there is no method of reading which can be applied to every building. Departing from this postulation and the epistemological and methodological aspects introduced, the following chapters aim at developing different models of textual reading, which may be applied in different

conditions according to their relevance: textual-analytical model, textual-transformational model, and textual-decompositional model. Since architectural precedent is reconceptualized as a concept, which rejects methodologism, these three modes of reading can be considered models rather than methods.

2.4 Remarks

This chapter has reconceptualized the term architectural precedent. Starting with the definition of the term in law as an authoritative and binding judicial decision, the study has discussed the issues related with precedent within the discipline of law. Then the study has discussed the use of the term in the discipline of architecture. With reference to Hancock's theory of precedent, the study has made a differentiation between history and tradition, and has introduced place, type, and principle as criteria for the selection of precedents along with analytical, experiential, and transformational methods as rigorous methods. Then, it has moved towards a trans-historical view of the architectural precedent and has differentiated between the attitudes of architects and architectural historians towards the concept of precedent.

In the section on epistemological aspects, this chapter has made an evaluation of the truth value of the knowledge derived from the precedent. The study has introduced the notions of textualism with reference to Derrida and Rorty, and creative misreading with reference to Bloom as introduced by Rifkind. Then a differentiation has been made between formal and textual reading with reference to Eisenman. The process of textual reading is defined as generating knowledge rather than deciphering codes underlying a precedent. It is argued that the knowledge of precedent is made rather than found. In the section on methodological aspects, the study has defined the fundamentals of textual reading. It is discussed that textual reading of precedents is based on the denial of causality, contextuality, historicity, intentionality, and diagnosticity. It is also argued that there is no single method of textual reading which is applicable to every building because the method of reading originates from the building's own internal history.

Departing from the conceptual, epistemological, and methodological aspects introduced in this chapter, this thesis proposes three textual models which can be applied to certain precedents according to their relevance. The following three chapters of this dissertation are dedicated to these three models.

CHAPTER 3

TEXTUAL-ANALYTICAL MODEL

This chapter introduces the textual-analytical model as one form of textual reading. The textual-analytical model is developed with reference to three major text: Colin Rowe's "The Mathematics of the Ideal Villa", Jeffrey Hildner's "Remembering the Mathematics of the Ideal Villa", and Rudolf Wittkower's *Architectural Principles in the Age of Humanism*". Departing from these texts, this chapter aims at developing the fundamental properties and indicators of the textual-analytical model.

3.1 The Mathematics of the Ideal Villa

Textual-analytical reading can be defined as the action of exploring an architectural object via universal tools such as mathematics, geometry and musical concord. One of the most significant examples of textual-analytical exploration is Colin Rowe's "Mathematics of the Ideal Villa". In his prominent text, Rowe makes a comparison of two canonical villas by Andrea Palladio and Le Corbusier: Villa Foscari, the Malcontenta (1550-1560) and Villa Stein at Garches (1927). [Figure 1, 2] Though the two buildings belong to different epochs and are guided by different *Zeitgeist*, Rowe manages to bring them to a common ground where they can be related and compared according to laws of proportion. In doing so, with reference to Christopher Wren, Rowe first differentiates between natural beauty which is based on geometry, and customary beauty which is based on perception and familiarity:

There are two causes of beauty- natural and customary. Natural is from *geometry* consisting in uniformity, that is *equality and proportion*. Customary beauty is begotten by the use, as familiarity breeds a love for things not in themselves lovely. Here lies the great occasion of errors, but always the true test is natural or geometric beauty. Geometrical figures are naturally more beautiful than irregular ones: the square, the circle are the most beautiful, next the parallelogram and the oval. There are only two beautiful positions of straight lines, perpendicular and horizontal; this is from Nature and consequently necessity, no other than upright being firm.⁸⁸

That is to say, while customary beauty is defined by subjective and temporary features such as style or zeitgeist, natural beauty is defined by objective and permanent features such as geometry, mathematics and musical concord. Eliminating the customary material in Malcontenta and Garches such as the Roman reference in the former or the mechanical reference in the latter, Rowe reveals the features of natural beauty underlying both ideal villas. Deciphering the mathematical relations beneath Malcontenta and Garches, Rowe argues that the two villas by Palladio and Le Corbusier share a common standard in terms of natural beauty, though they belong to different worlds in terms of their customary material.⁸⁹ That is to say, the quality of the “ideal” lies not in their customary beauty which is cultural and historical, but in their natural beauty which is “transcultural” and “transhistorical”.

In both Malcontenta and Garches, it is possible to observe both architects’ adherence to laws of proportion. In the case of Malcontenta, mathematics and musical concord appear as the basis of ideal proportion since it is assumed that there is “correspondence between the perfect numbers, the proportions of the human figure and the elements of musical harmony.”⁹⁰ Here Rowe refers to Sir Henry Wotton:

The two principal Consonances that most ravish the Ear are, by the consent of all Nature, the Fifth and the Octave; whereof the first riseth radically, from the Proportion between two and three. The other, from

⁸⁸ Rowe, *The Mathematics of the Ideal Villa*, 2. Emphasis added.

⁸⁹ Ibid, 13.

⁹⁰ Ibid, 8.

the double Interval, between one and two, or between two and four, etc. Now if we shall transport these Proportions, from audible to visible Objects, and apply them as shall fall fittest..., there will in dubitably result from either, a graceful and harmonious Contentment to the Eye.⁹¹

In Malcontenta proportions appear as a projection of the harmony of the universe, like the one of Platonic and Pythagorean speculation according to which the whole cosmos is thought to be formed within the triangle made by the square and the cube of the numbers 1,2,3.⁹² However, the motive is very different in the case of Garches. Rather than mimicking the proportions in the nature, Le Corbusier aims at achieving some kind of “precision, exactness, and universality” as well as “planned obscurity”. Despite the different motives, Rowe argues that both buildings are ruled by laws of proportion.

Comparing Malcontenta and Garches, the first feature Rowe discovers is that both buildings are “blocks of corresponding volume” measuring 8 units x 5 ½ units x 5 units in three dimensions.⁹³ In relation, the second feature is that both buildings exhibit a bay structure that is composed of an alternating rhythm of double and single spatial intervals the proportion series of which appears as 2 : 1 : 2: 1 : 2. When the main blocks are read from front to back, it is seen that they display a tripartite division; 2:2: 1 ½ in Malcontenta and ½ : 1 ½ : 1 ½ : 1 ½ : ½ in Garches.⁹⁴ However, the attached portico of Malcontenta and the extruding terrace of Garches change the sequence to 1 ½ : 2 : 2: 1 ½ and 1 ½ : ½ : 1 ½ : 1 ½ : 1 ½ : ½ respectively. (Figure 1) While the portico of Malcontenta appears as an element emphasizing the central bay and reinforcing symmetry, the terrace of Garches appears as an element compressing the central bay and breaking the symmetry of the plan. Despite these differences, Rowe reveals that the projecting element in both occupy the same depth of 1 ½ units.⁹⁵ [Figure 3, 4]

⁹¹ Ibid.

⁹² Ibid.

⁹³ Ibid, 3.

⁹⁴ Ibid, 4.

⁹⁵ Ibid.

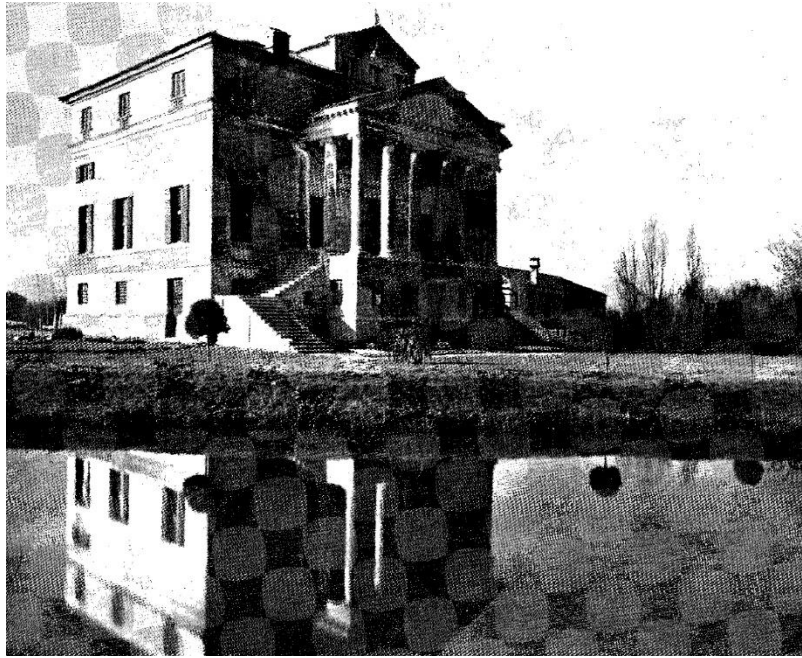


Figure 1. Villa Malcontenta [Colin Rowe, *The Mathematics of the Ideal Villa, and Other Essays*. Cambridge: The MIT Press, 1976, 19.]



Figure 2. Villa Stein [Colin Rowe, *The Mathematics of the Ideal Villa, and Other Essays*. Cambridge: The MIT Press, 1976, 20.]

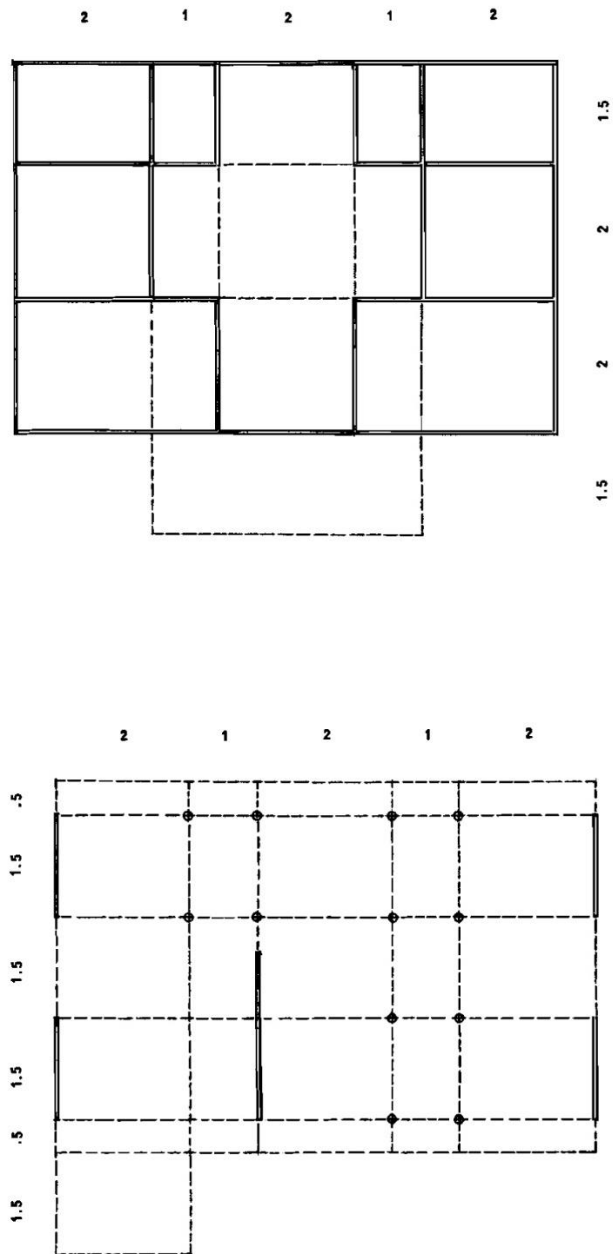


Figure 3. Rowe's analytical diagrams of Villa Malcontenta and Villa Stein [Colin Rowe, *The Mathematics of the Ideal Villa, and Other Essays*. Cambridge: The MIT Press, 1976, 5.]

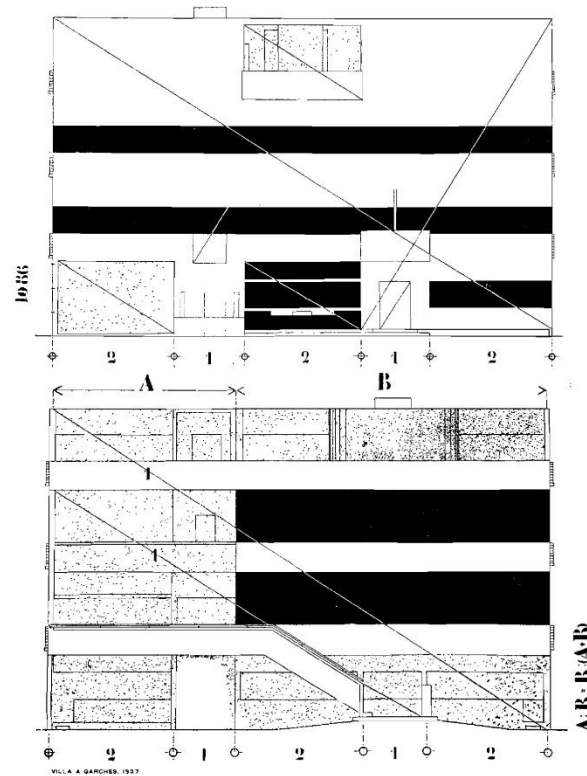


Figure 4. Rowe's analysis of the Elevations of Villa Stein and generation of a sequence [Colin Rowe, *The Mathematics of the Ideal Villa, and Other Essays*. Cambridge: The MIT Press, 1976, 10.]

What is significant in Rowe's analysis is that, the proportional relationship between the different elements of the two villas also reveals correspondences between these elements. One example of such correspondence is between the attached portico of Malcontenta and extruded terrace of Garches as it is just mentioned above. Another correspondence is between the upper pediment of Malcontenta and roof pavilion of Garches as they are observed from the garden elevations. Both the pediment and roof pavilion occupy 2 units in width and are located on top of the center of the solid part of that elevations. The difference is that while the pediment of Malcontenta has a central position in the whole elevation, the roof pavilion has an asymmetrical one.⁹⁶ Similar correspondence is between the upper pediment of Malcontenta and the upper

⁹⁶ Ibid, 7.

balcony of Garches in the entrance elevation. Here, again the pediment and the balcony occupy 2 units in width and have symmetrical position in the whole elevation. That is to say both emphasize the central bay and ensure symmetry within the building.⁹⁷ These correspondences implied by geometrical and mathematical relations can be called “displacements,” in which each element is divorced from its original context and reappears in a different form but in the same relation to the building as a whole. [Figure 5]

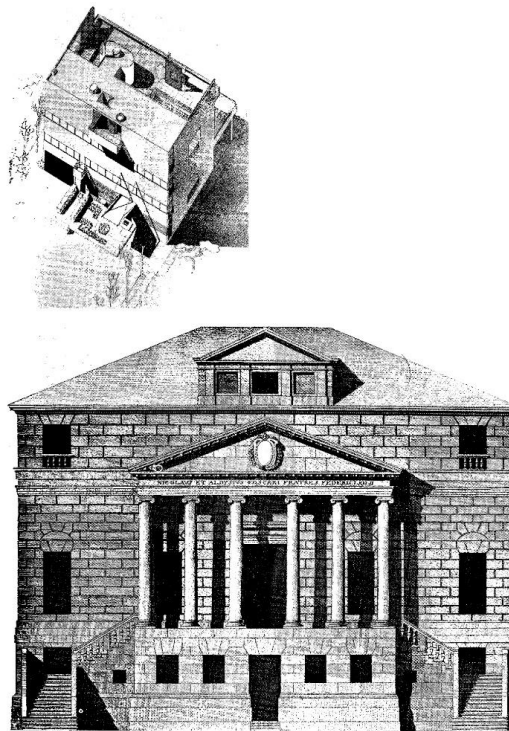


Figure 5. Displacement of the “pediment” in Villa Stein [Colin Rowe, *The Mathematics of the Ideal Villa, and Other Essays*. Cambridge: The MIT Press, 1976, 23.]

“The Mathematics of the Ideal Villa: Palladio and Le Corbusier compared” has great significance in terms of the discourse of precedent because it brings together in Rowe’s words “two buildings which, in their forms and evocations, are superficially so entirely

⁹⁷ Ibid.

unlike that to bring them together would seem to be facetious”.⁹⁸ Rowe’s study shows that such comparison does not require any stylistic, materialistic or intentional link between two buildings. Yet, it only requires a common ground according to which two different subjects can be evaluated. In the case of Rowe, specifically *The Mathematics of the Ideal Villa*, the common ground is mathematics; a ground which is not only exact but also universal. As Greg Lynn indicates in “New Variations on the Rowe Complex”:

Using a mathematical and formal system, Rowe was able to argue for architectural continuities that cut across cultural, historical, constructional, and spatial particularities. Employing his model, Rowe attempted to establish a mathematical-formal foundation for the comparison of two pairs of villa projects by Palladio and Le Corbusier.⁹⁹

According to Lynn, in this sense Rowe’s text “became much more than a historical analysis and indeed was extended as an instrumental design discourse in its own right”.¹⁰⁰ Yet, an interesting aspect of Rowe’s study is that his reading of Malcontenta and Garches is based on a frontal reading which focuses on the east-west intervals of the bay structure.

3.2 Remembering the Mathematics of the Ideal Villa

In “Remembering the Mathematics of the Ideal Villa” Jeffrey Hildner points that Rowe “revealed what Le Corbusier had concealed about the mathematics of the neo-Palladian structural grid” of Villa Stein.¹⁰¹ According to Hildner, Rowe’s discovery of “the ratios of the structural intervals that define the organization of the villa from front

⁹⁸ Ibid, 3.

⁹⁹ Greg Lynn, “New Variations on the Rowe Complex,” *Any* 7 (1994): 39.

¹⁰⁰ Ibid, 40.

¹⁰¹ Jeffrey Hildner, “Remembering the Mathematics of the Ideal Villa,” *Journal of Architectural Education* 52, no.3 (1999): 143.

to back” is very significant in terms of understanding how proportion ruled Le Corbusier’s projects, yet “has been underappreciated in subsequent scholarship”.¹⁰² Hildner argues that, the north-south intervals of the Villa Stein which are neglected in Rowe’s analysis are no less important than the east-west axis on which Rowe’s analysis is founded. Therefore, focusing on the numeric structure of the villa and redrawing Rowe’s diagrams with reference to the north-south axes, Hildner reexamines the mathematics underlying the grid of the Villa Stein and proposes a new numbering system different from the one of Rowe’s. Hildner argues that the alternative system he proposes “heightens perception of the grid’s fundamental mathematical elegance and ideality as well as its comprehensive control of the ‘extended field’ of the site and elevations/facades.”¹⁰³ Hildner’s reading of the Villa Stein implies certain tools related with the methodological aspects of the discourse of the precedent.

One significant issue Hildner addresses is the differentiation between the use of an alphabetical and numeric sequence in representing the rhythm of the structural intervals. Hildner criticizes the reductionist approach applied by some scholars, in which the rhythm ABABA is used instead of 2:1:2:1:2. As Hildner points out, while an alphabetical sequence only indicates the “alternation of bays,” a numerical sequence gives information about the ratio through which the so called “A” and “B” is related to each other.¹⁰⁴ That is to say, ABABA is not capable of indicating the relationship between A and B whereas 2:1:2:1:2 is. The sequence ABABA does neither require nor accept the use of “colon” between the letters since the alphabetical sequence falls in describing any relation other than “A coming before B”. Thus, representing the structural intervals of the Villa Stein by the sequence of ABABA is not an abstraction but a reductionist approach which eliminates the relation between A and B. In this sense Hildner’s approach is parallel to Rowe’s since they both utilize the “colon as a

¹⁰² Ibid.

¹⁰³ Ibid.

¹⁰⁴ Ibid.

device” which in Robert Somol’s words “establishes relation, balance, parity, ratio, proportion, analogy, and reason”.¹⁰⁵

Another significant concept Hildner brings into discussion is “memorability” as it is first mentioned by Rowe in *Mathematics of the Ideal Villa*. In his essay, describing Palladio’s Villa Capra-Rotunda, Rowe states:

As the ideal type of centralized building Palladio’s Villa Capra-Rotonda has, perhaps more than any other house, imposed itself upon the imagination. Mathematical, abstract; four square, without apparent function and totally *memorable*, its derivatives have enjoyed universal distribution; and, when he writes of it, Palladio is lyrical.¹⁰⁶

Since Rowe focuses on the east-west intervals of Malcontenta and Stein, it can be inferred that for Rowe it is the sequence 2:1:2:1:2 which makes the two villas memorable because it is mathematically more “elegant” than the sequence $\frac{1}{2} : 1 \frac{1}{2} : 1 \frac{1}{2} : 1 \frac{1}{2} : \frac{1}{2}$ which is defined by the north-south intervals. However Hildner argues that it is more the Grid than the east-west interval which makes Villa Stein memorable.¹⁰⁷ The Grid is composed both of the “abscissas” (x=north-south coordinates) and the “ordinates” (y=east-west coordinates), therefore it is necessary to examine the interdependence of the two in order to understand the quality of the ideal which makes the building memorable.

In order to understand the organizing function of the abscissas and the ordinates within the Grid, Hildner reexamines the structural intervals by redrawing Rowe’s diagrams. Hildner reveals that one of the significant differences between the two intervals is that “the east-west intervals are contained by the building’s *primary rectangular field of enclosure*, whereas the north-south intervals extend into the site and function to organize the spatial relationships of various secondary and tertiary phenomena” like

¹⁰⁵ Robert Somol, “In Form Falls Fiction: Misreading the Avantgarde in Contemporary Architecture,” (Unpublished PhD. diss., The University of Chicago, 1997), 44.

¹⁰⁶ Rowe, *The Mathematics of the Ideal Villa*, 2. Emphasis added.

¹⁰⁷ Hildner, 143.

the extended terrace of $1\frac{1}{2}$ units.¹⁰⁸ That is to say, while the east-west intervals are associated with “spatial stasis,” the north-south intervals are associated with “spatial extension.”¹⁰⁹ Keeping this difference in mind, Hildner argues that it is both five east-west and the five major north-south intervals that together describe the Grid and introduces a term called the “summary sequence” which is the sequence of numbers representing the intervals in ascending order. Thus for the Le Corbusier-Rowe system the summary sequence appears as $\frac{1}{2} : 1 : 1\frac{1}{2} : 2$. According to Hildner “these are the four numbers that are now associated in the literature of architecture with the villa’s fundamental numerical structure”.¹¹⁰

According to Hildner, although Rowe shows both the east-west intervals and north-south intervals on his analytical diagrams, the sequence of the north-south axis does not contribute to the memorability of the grid due to its mathematical inelegance:

In point of fact, one of the most original aspects of Rowe’s essay was that he drew attention to the ratios of the north-south intervals and, in doing so, revealed what Le Corbusier had concealed- namely the complete mathematical structure of the grid. However the inelegance of the north-south sequence that Rowe revealed ($\frac{1}{2} : 1\frac{1}{2} : 1\frac{1}{2} : 1\frac{1}{2} : \frac{1}{2}$) presents no small challenge to one’s ability to remember it, and consequently, to remember the grid as a whole.¹¹¹

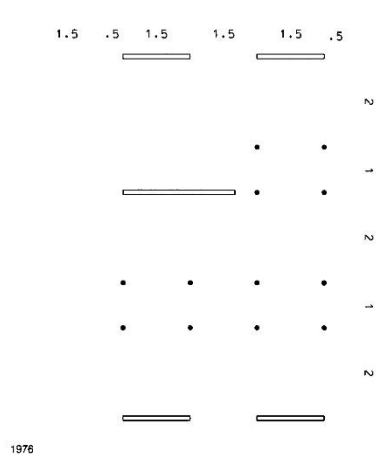
Therefore, Hildner uses the mathematical device of “doubling” the numbers in order to eliminate the inelegant fractions of the north-south axis. Thus, in Hildner’s numeric system the east-west sequence and the north-south sequence become 4:2:4:2:4:2 and 1:3:3:3:1 respectively, shifting the summary sequence from $\frac{1}{2} : 1 : 1\frac{1}{2} : 2$ to 1:2:3:4, a sequence which is defined by the first four integers of the Platonic-Pythagorean triangle. [Figure 6]

¹⁰⁸ Ibid., 144. Emphasis added.

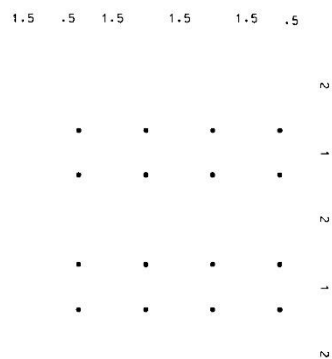
¹⁰⁹ Ibid, 147.

¹¹⁰ Ibid, 144.

¹¹¹ Ibid, 145.

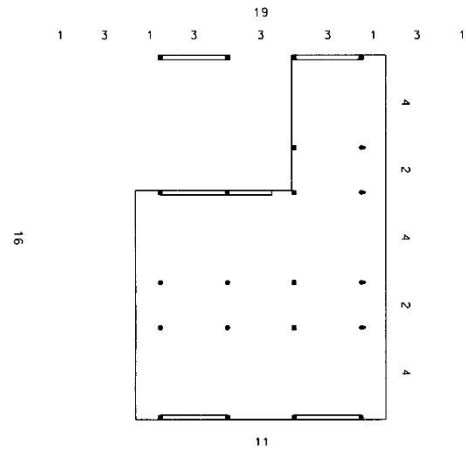


1976

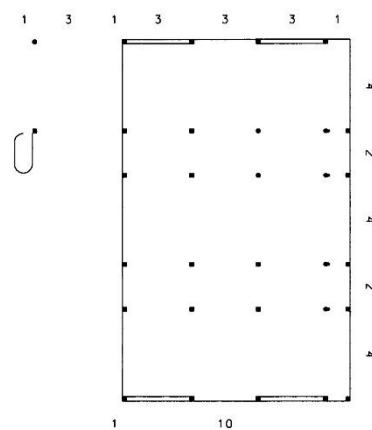


1947

1. Rowe's diagrams, redrawn by the author, of the schematic interval structure of the Villa de Monzie/Stein's plan, based on Rowe's original illustration for the 1947 article (ground floor) and on the revised illustration published in the 1976 edition (piano nobile). In the Le Corbusier-Rowe numbering system, the ratios that describe the primary rectangular field of the villa (east-west/north-south) are 2:1;2:1;2:1½;1½;1½;1½;½. The "summary sequence" is ½:1.1½:2.



PIANO NOBILE



GROUND FLOOR

2. Diagrams of the schematic interval-structure of the Villa de Monzie/Stein's ground-floor and piano nobile plans, showing the alternative numbering system based on doubling. Ratios that describe the primary rectangular field of the villa (north-south/east-west) are 1:3;3:3;14:2;4:2;4. The "summary sequence" is 1:2;3:4. Column locations and shapes are specific, and additional north-south intervals that extend into the site are also shown.

Figure 6. Hildner's reproduction of Rowe's diagrams and generation of a new summary sequence [Jeffrey Hildner, "Remembering the Mathematics of the Ideal Villa," *Journal of Architectural Education* 52, no.3 (1999): 144-145]

Another significant concept Hildner introduces is “dimensional datum” which “provides the basis for the systematic structuring of significant compositional moves and for the standardization of the building’s components”.¹¹² According to Hildner, one of the main differences between the two numbering systems is that they have different dimensional datum:

With respect to the problem of which structural interval of the grid is primary, or generative- that is which interval ought to be assigned the significant number 1- the systems clearly differ on conceptual and pragmatic level as much as they do on the level of mathematical expression.¹¹³

In the Le Corbusier-Rowe numbering system the minor east-west interval corresponds to 2,5 meters which is represented as “1” in the summary sequence. However, in this numbering system “1” is not associated with A, as one expects it to be. It is rather associated with B since east-west and north-south sequence is $2:1:2:1:2 \mid \frac{1}{2} : 1 \frac{1}{2} : 1 \frac{1}{2} : 1 \frac{1}{2} : \frac{1}{2} = ABABA \mid CDDDC$ respectively. However in Hildner’s alternative numbering system, the cantilever interval of 1,25 meters is taken as a starting point and designated as “1” in the summary sequence. In this system the north-south sequence and the east-west sequence becomes $1:3:3:3:1 \mid 4:2:4:2:4 = ACCCA \mid DBDBD$ in which 1 is associated with A. In Hildner’s system 1-1,25 meters is the dimensional datum which is “the irreducible basic unit, or module, of which the other intervals are whole multiple moduli”.¹¹⁴

The last notable concept introduced by Hildner is “extended field” which denotes the structure of the larger site not limited to the field of enclosure of the building alone. [Figure 7] In the case of the Villa Stein, the extruded terrace and the outdoor stair together with the primary rectangular volume constitute the extended horizontal rectangular field. According to Hildner, the primary rectangular volume of the villa

¹¹² Ibid, 148

¹¹³ Ibid. Emphasis original.

¹¹⁴ Ibid, 148.

oscillates between two buildings depending on the floor level. The ratio of the rectangular field appears as 10:16 at the ground floor and 11:16 at the *piano nobile*, due to the double cantilever zone. [Figure 8] However, the organizing effect of the north-south intervals extends through the terrace and the outdoor stair producing a sequence of 1:3:1:3:3:3:1:3:1 and an extended horizontal field of 19:16.¹¹⁵ Extending the impact of the north-south sequence Hildner also constructs a mathematical link between the villa and the gate house.¹¹⁶ Here, the concept of extended field is significant for Hildner because it supports the idea that north-south intervals of Villa Stein have an organizing effect no less than the east-west ones.

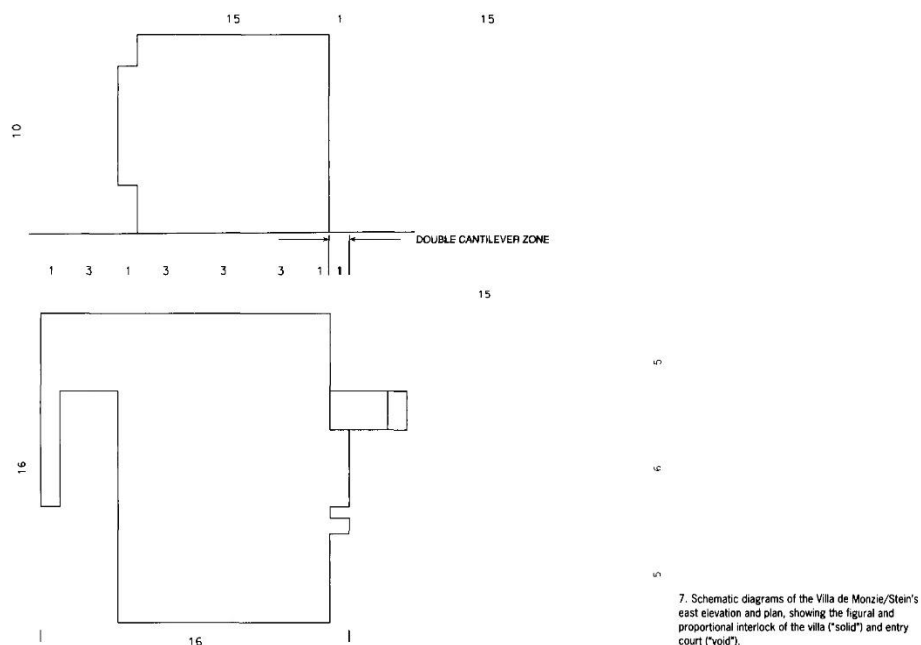


Figure 7. Hildner's analysis of Villa Stein and the double cantilever zone. [Jeffrey Hildner, "Remembering the Mathematics of the Ideal Villa," *Journal of Architectural Education* 52, no.3 (1999): 151]

¹¹⁵ Ibid, 145.

¹¹⁶ Ibid, 153.

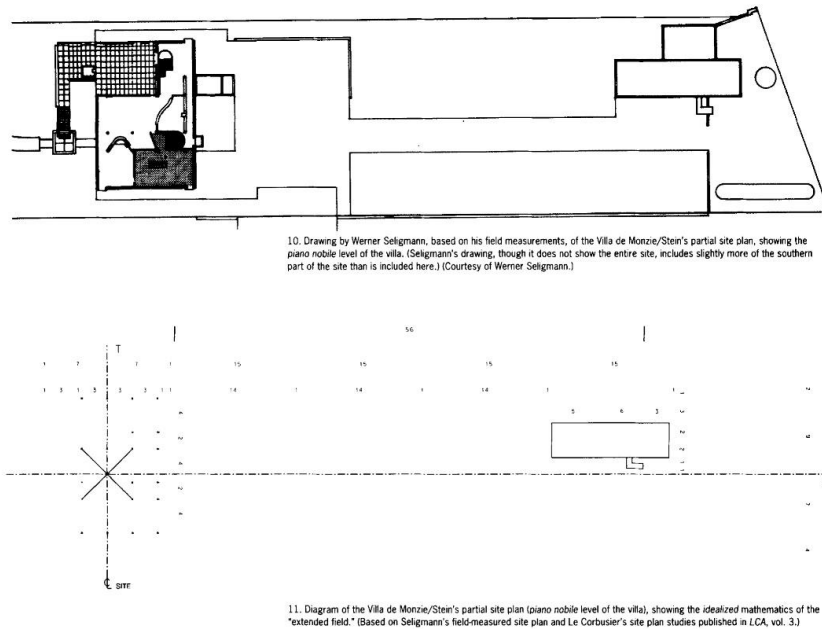


Figure 8. Hildner's analysis of extended field in Villa Stein [Jeffrey Hildner, "Remembering the Mathematics of the Ideal Villa," *Journal of Architectural Education* 52, no.3 (1999): 153]

Another significant point in Hildner's essay is the reference given to Russian formalism with the use of the term "defamiliarization".

I maintain, however, that if it is considered through a new optic, if the mathematical expression is *transformed* or *defamiliarized*, then the grid, rather ironically, is found to be possessed of the essential quality that makes it totally memorable: the quality of the *ideal*.¹¹⁷

Defamiliarization is a term introduced by Russian formalist Viktor Shklovsky in "Art as Technique".¹¹⁸ According to Shklovsky defamiliarization is the technique of art which makes the forms of art more difficult by prolonging the process of perception. Making the familiar seem strange, defamiliarization is "to look with a high level of

¹¹⁷ Ibid. Emphasis original.

¹¹⁸ Viktor Shklovsky, "Art as Technique," in *Russian Formalist Criticism: Four Essays*, edited and translated by Lee T. Lemon and Marion J. Reis (Lincoln, London: University of Nebraska Press, 1965): 3-24.

awareness”.¹¹⁹ In “Epistemological Formalism and Its Influence on Architecture: A concise review” Hakan Anay argues that the formal method developed by Shklovsky and the theory of “opacity” as opposed to “transparency” has influenced the field of architecture as well and especially the architects Colin Rowe, Peter Eisenman, Michael Graves, Charles Gwathmey, John Hejduk, Richard Meier, Alan Colquhoun, Alexander Tzonis and Liane Lefaivre who contributed to the understanding of formalism as a positive rather than a negative term in architecture.¹²⁰

In “Reality as History: Notes for a Discussion of Realism in Architecture” Martin Steinmann also refers to Russian formalist influence on architecture theory.¹²¹ Reiterating Shklovsky’s statement that the form of a work of art “is defined in relation to other, already existing forms,” Steinmann holds the view that “art is perceived by association and dissociation with other works of art”:

The architect then does not invent his language from nothing: he makes use of the language of his predecessors for his own intentions, changing it little by little, enriching it with new meaning, but meanings deduced from the old ones, as I indicated before- a work owes more to works that preceded it than to the invention of the artist who created it.¹²²

Steinmann’s argument based on the theories of Russian formalism is, in this sense parallel with Rowe’s idea that precedent is a prerequisite of creativity and invention.¹²³ In this sense, this thesis argues that the formal method introduced by Shklovsky may be a source from which tools for defamiliarization and misreading can be extracted.

¹¹⁹ Ibid., 5.

¹²⁰ Hakan Anay, “Epistemological Formalism and Its Influence on Architecture: A concise review,” *ITU A | Z* 9, no.1 (2012): 70-85.

¹²¹ Martin Steinmann, “Reality as History: Notes for a Discussion of Realism in Architecture,” *A + U* 69 (September 1976) in K. Michael Hays ed., *Architecture Theory since 1968* (Cambridge: The MIT Press, 2000), 250.

¹²² Ibid.

¹²³ See Colin Rowe, “Letter to the Editors,” *Harvard Architecture Review* 5 (1986): 188-189.

Hildner's study is very noteworthy in terms of the discourse of the precedent. Firstly, it exemplifies how a building can be read differently with the same tools, privileging different directions: Rowe's emphasis on east-west intervals (front to back) and Hildner's emphasis on north-south intervals (from side to side). Secondly, it shows how the colon becomes an analytical device that is flexible enough to suggest alternating readings and clarifies the difference between an alphabetical sequence and numerical sequence in representing the rhythm of intervals. Thirdly, it further develops the notion of "memorability" in relation to two different dimensions (abscissas and ordinate) and explains it with a numerical sequence that is universal. Last but not least, it develops a conceptual framework for the use of mathematics in analyzing a building: the summary sequence, dimensional datum, and extended field. In this sense Hildner's study should be seen as complementary to Rowe's rather than a critique of it.

3.3 Architectural Principles in the Age of Humanism

While Rowe's *Mathematics of the Ideal Villa* is a milestone for the discussion of precedent, it cannot be considered independent from his mentor Rudolf Wittkower's *Architectural Principles in the Age of Humanism* in which he establishes a rational basis for 16th century architecture departing from mathematical formulations, geometric principles and musical concord. Working with analytical diagrams applied on plans and elevations of buildings, Wittkower aims at deciphering the code of what is called Renaissance Architecture. Analyzing mainly Alberti and Palladio's works, Wittkower concludes that "[t]he conviction that architecture is a science, and that each part of a building, inside as well as outside, has to be integrated into one and the same system of mathematical ratios, may be called the basic axiom of Renaissance architects".¹²⁴ According to Alexander Caragone, "Wittkower challenged the argument that the architecture of the Renaissance is the result of an essentially abstract and undifferentiated aesthetic, even hedonistic program" yet he "found instead the

¹²⁴ Rudolf Wittkower, "The Problem of Harmonic Proportion in Architecture" in *Architectural Principles in the Age of Humanism*, (New York: W.W Norton, 1971), 101.

architects of the Renaissance submitted to an overarching divine, cosmological order based upon Pythagorean and Platonic ideas of the universe.¹²⁵

Wittkower's contribution to the discourse of the precedent is that he escapes historical and stylistic connotations and focuses on the universal and precise attributes of architectural form. According to Anthony Vidler, Wittkower was one of the first architectural historians of the time capable of analyzing forms without any historical or stylistic connotations:

Dr. Wittkower is regarded by the younger architects as the *only* art historian working in England capable of describing and analyzing buildings *in spatial and plastic terms and not in terms of derivation and dates.*" For them *Architectural Principles* was "the most important work on architecture published in England since the War."¹²⁶

In this sense Wittkower's approach to precedent can be considered analytical rather than historical; an approach further developed by Rowe in his later work.

In his book Wittkower argues that Palladio applied the harmonic ratios and geometric principles all over his buildings. The mathematical and geometric principles can be read in "each single room" as well in the "relation of the rooms to each other".¹²⁷ In the chapter titled "The Problem of Harmonic Proportion in Architecture" Wittkower discusses how these laws of proportion can be read in Palladio's villas. Wittkower reveals that the ratios applied in Villa Malcontenta are 12:16:24:32:

The smallest room on either side of the cross-shaped hall measures 12x16 feet, the next one 16x16 and the largest 16x24, while the width of the hall is 32 feet. Thus, the consistent series 12, 16, 24, 32 is the *keynote to the building*... The diameter of the columns, 2 ft., represents *the smallest unit, the module*, and by a process of multiplication beginning with two all the ratios of the building can be derived.¹²⁸

¹²⁵ Alexander Caragone, *The Texas Ranger: Notes from the Architectural Underground* (Cambridge: The MIT Press, 1995), 114-115.

¹²⁶ Anthony Vidler, *Histories of the Immediate Present: Inventing Architectural Modernism, 1930-1975*, (Ph.D. diss., Technische Universiteit Delft, 2008), 77. Emphasis added.

¹²⁷ Wittkower, 72.

¹²⁸ Ibid., 37. Emphasis added.

To re-read this paragraph with Hildner's terminology, it can be argued that the consistent series 12,16,24,32 which is denoted by Wittkower as "keynote to the building" may well be interpreted as the series which makes the building "memorable". The difference of Hildner's strategy is that he reduces the numbers to a more simple series by applying a common denominator, whereas Wittkower keeps the real measures in feet. If we apply Hildner's tools to Wittkower's analysis we acquire the series 3,4,6,8 which is "more easily remembered". If the dimensional datum is considered 2 feet, the summary sequence becomes 6,8,12,24. Though the dimensional datum or the module is different in each villa, in Wittkower's analysis it corresponds to the "diameter of the columns".

In the chapter titled "Principles of Palladio's Architecture", Wittkower analyzes 11 villas by Palladio according to geometrical relations and laws of proportions. Comparing and evaluating the differences between the 11 villas, Wittkower sought for a more generalizable systematic geometric organization underlying the villas. His claim was that all of Palladio's domestic architecture was derived from "a single geometric formula".¹²⁹ [Figure 9] According to Wittkower:

The pattern of these plans is founded on the straight-forward needs of the Italian villa: loggias and a large hall in the central axis, two or three living rooms or bedrooms of various sizes at the sides, and between them and the hall, space for small spare rooms and the staircases. An analysis of a few typical plans ranging over a period of 15 years will prove that they are derived from a single geometric formula.¹³⁰

¹²⁹ Lynn, 39.

¹³⁰ Wittkower, 71.

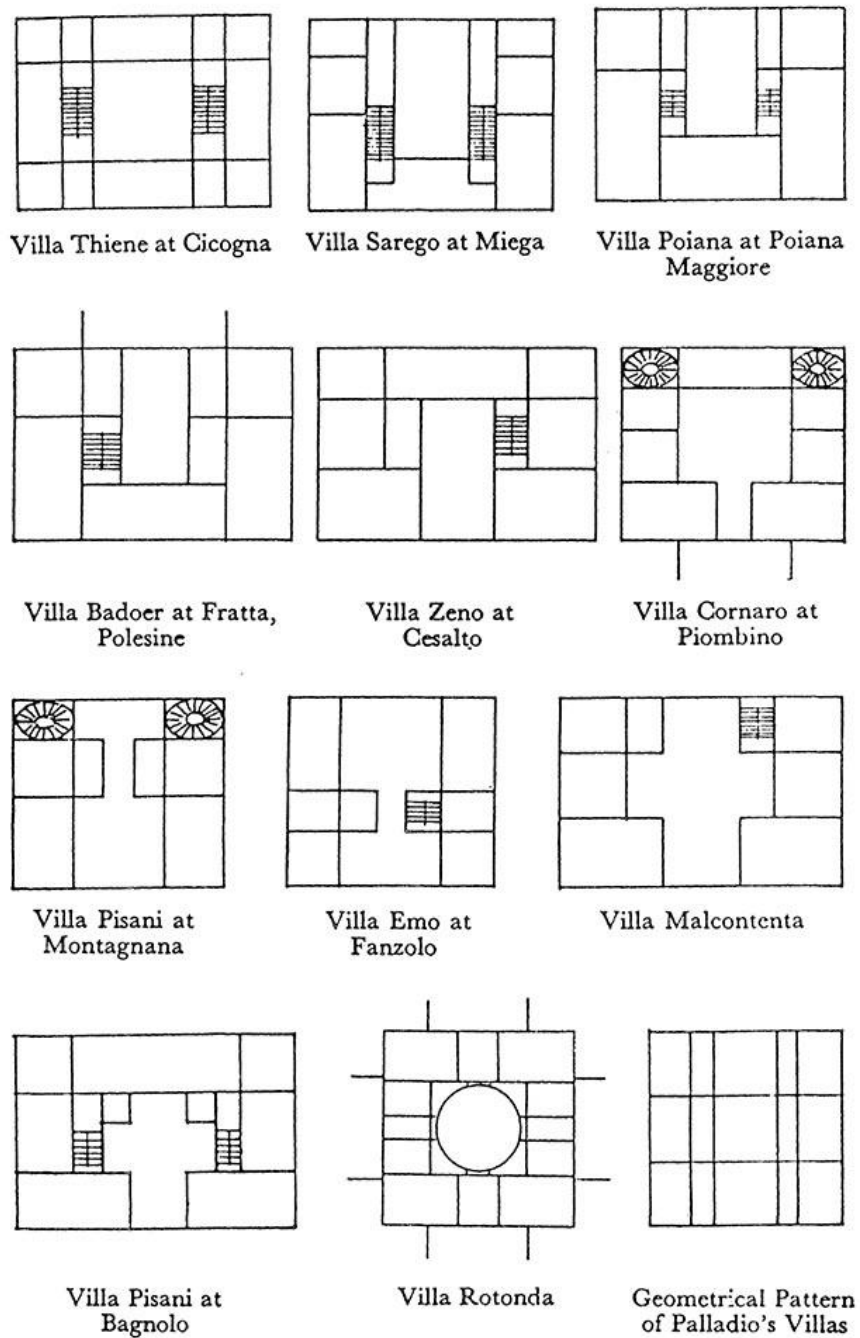


Figure 9. The Geometry of Palladian Villas [Rudolf Wittkower, "The Problem of Harmonic Proportion in Architecture" in *Architectural Principles in the Age of Humanism*, New York: W.W Norton, 1971, 73]

Starting with the Villa Godi Porto, and continuing with the Villa Thiene, The Villa Sarego, the Villa Pojana, the Villa Badoer, the Villa Zeno, and the Villa Cornaro, Villa Malcontenta and Villa Capra-Rotonda, Wittkower argues that the plan types of all eleven villas appear as variations of an ideal one:

What was in Palladio's mind when he experimented over and over again with the same elements? Once he had found the basic geometric pattern for the problem of "villa," he adapted it as clearly and as simply as possible to the special requirements of each commission. He reconciled the task at hand with the "certain truth" of mathematics which is final and unchangeable. The geometrical keynote is, subconsciously rather than consciously, perceptible to everyone who visits Palladio's villas and it is this that gives his buildings their convincing quality.¹³¹

Departing from the common properties of these 11 villas, Wittkower reconstructs Palladio's method and invents the 12th villa, which embodies the geometric and mathematical quality of the ideal:

Wittkower developed a single, fixed, and unchanging type of proportional harmonic regulation (the nine square grid) that was seen ideally as an unchanging presence, a central theme around which all of the villas would be orchestrated. This ideal structure was not present in any single villa, yet the 11 villas collectively exhibited its hidden presence in what Wittkower referred to as *variations*. Wittkower was careful never to argue for the existence of the ideal type historically, and since the 12th villa was an invention of Wittkower's, it was not important that Palladio knew nothing of the existence of this newly minted regulative structure.¹³²

Wittkower's analysis and invention of the new villa is significant because the architectural precedent is not only divorced from its context but also the intentions of its architect which, for its time, is a very radical approach.

The issue of repetition and variation is critical in both Rowe and Wittkower's work. According to Lynn, Wittkower and Rowe's method of analysis is similar to Francis Galton's photographic technique which involves "superposition and multiple

¹³¹ Wittkower, 72.

¹³² Lynn, 39.

exposures of several faces on the same photographic image”.¹³³ One example given by Lynn is Galton’s study of three sisters. In his study Galton superimposes the frontal and facial images of three sisters upon one another hoping to achieve a familial genotypical image through the superimposition of images and the cancellation of differences. In Lynn’s words:

Galton provided the photographic technique by which differences could be rendered as mere variations. As those variations were compared and eliminated, all that remained in the end was the previously hidden order that was present in no particular individual, but underlay all individuals”.¹³⁴

Here, the familial genotypical image Galton aims to reveal is analogous to the 12th villa Wittkower invented, and also to Rowe’s “ideal villa”.

In this sense the Villa Malcontenta and the Villa Stein are thought of as originating from the same archetype through a series of superimpositions and variations. Lynn argues that “Rowe catalogued the differences between Palladian and Corbusian villas in order to dismiss them as mere contingencies below which an ideal proportional system was operative”.¹³⁵ For Rowe, both the Villa Malcontenta and the Villa Stein originate from the same platonic archetype of the villa and the “cube” as a basic geometric form:

Geometrically, both architects may be said to have approached something of the *platonic archetype of the ideal villa* to which the fantasy of the Virgilian dream might be supposed to relate; and the realization of an idea which is represented by the *house as a cube* could also be presumed to lend itself very readily to the purposes of Virgillian dreaming.¹³⁶

According to Lynn both Rowe and Wittkower dealt with the exact definition of geometry and mathematically definable forms. In this sense Lynn refers to Edmund

¹³³ Ibid.

¹³⁴ Ibid.

¹³⁵ Ibid.

¹³⁶ Rowe, 14. Emphasis added.

Husserl's Origin of Geometry and the concept of "eidetic type".¹³⁷ According to Husserl, eidetic types are geometrically exact and universally definable forms:

One such example is the sphere, which can be defined as a surface composed of an intimate number of points, all of which are equidistant from a single radial point... Though the form of the sphere does not exist materially in any specific place or time, it does exist as a universal, transcendental, ideal, and essential form... The sphere like any other eidetic form, does not exist in its ideal form [...]¹³⁸

Husserl's discussion on the sphere can easily be translated to the cube which is also geometrically definable, exact, rigorous and universal. According to Husserl, there also exists another category called "vague type" that is "anexact yet rigorous" meaning measurable yet irreducible and unrepeatable: round, dented, elongated, lens shaped, and umbilliform.¹³⁹

3.4 Indicators of Textual-Analytical Model

This section of the dissertation aims at formulating the indicators for the textual-analytical model departing from the readings mentioned in the previous sections. Although the word analysis has a very generic use, this thesis defines the word from the textual point of view and differentiates it from other modes of explorations. Any form can be analyzed focusing on certain aspects or characteristics of it, yet not all of them are textual. The textual-analytical model differs from a formal one in that it does not approach a building as if it has finite attributes to be perceived and categorized. It does not intend to explain a building in terms of its physical imagery, but by utilizing universal values such as rhythm or proportion. While the textual-analytical model is mathematical, it is neither descriptive nor categorical. Mathematics is only a tool to experiment on a precedent, it is not an end. The textual-analytical model does not

¹³⁷ Lynn, 40.

¹³⁸ Ibid., 41.

¹³⁹ Ibid.

necessarily result in a numeric description. The mathematical rules underlying the precedent do not have to correspond to aesthetic, stylistic or typological categories.

Besides, the word analytical cannot be used interchangeably with exploration, because according to this study not all explorations are analytical. While the textual-analytical model is one form of textual exploration, the others are described as textual-transformational and textual-decompositional. Although Peter Eisenman categorizes Colin Rowe as a formalist and associates him with methodologies of architectural historians, this research argues that Rowe's "Mathematics of The Ideal Villa: Palladio and Le Corbusier Compared" constitutes the base for the development of the textual-analytical model. The indicators of the textual-analytical model are determined as the colon, summary sequence, dimensional datum, grid, and field. These concepts have already been introduced in the previous sections, yet this section relates these concepts to each other and discusses them in terms of textual reading, in an effort to differentiate it from formal reading.

3.4.1 Colon

With reference to Somol, the colon has already been defined as a device which establishes relation, balance, parity, ratio, proportion, analogy, and reason. Ratio can be defined as "the relationship that exists between the size, number, or amount of two things and that is often represented by two numbers"¹⁴⁰ whereas proportion can be defined as the equivalency of ratios. While the numerical series 1-2-3-4 only indicates growth, the series 1:2:3:4 indicates the relation of parts to each other or the parts to the whole. In this sense it can be said that the colon gives numerical expression to the relation of parts and the whole. Besides determining the relations, another significant aspect of the colon is that it indicates reason due to universality of mathematics.

¹⁴⁰ www.merriam-webster.com.

The colon as an indicator of reason can be discussed in relation to nature as a source of inspiration. In her article “Le Corbusier and the Creative Use of Mathematics” Judi Loach discusses how Le Corbusier interpreted the proportions in nature as representations of the ideal. Loach refers to Le Corbusier’s definition of the relationship between an artistic work and mathematics:

For the artist, mathematics does not consist of the various branches of mathematics. It is not necessarily a matter of calculation but rather of the presence of a sovereign power; a law of infinite resonance, consonance, organisation. Rigour is nothing other than that which truly results in a work of art, whether it be a Leonardo drawing, or the fearsome exactness of the Parthenon (comparable in the cutting of its marble even with that of machine-tools), or the implicable and impeccable play of construction in the cathedral, or the unity in a Cézanne, or the law which determines a three, the unitary splendour of roots, trunk, branches, leaves, flowers, and fruit. Chance has no place in nature. Once one has understood what mathematics is -in the philosophical sense- thereafter one can discern it in all its works. Rigour, and exactness, are the means behind achieving solutions, the cause behind character, the rationale behind harmony.¹⁴¹

Therefore, similarly, the primary aim of architecture is the “exploitation of abstract laws, through numerical and geometrical calculations”.¹⁴² This is the essence of the search for harmonic proportions in architecture conducted by Renaissance architects as well.

The idea of harmonic proportions has been an ongoing issue of formal exploration in architecture and architectural history. However, this study argues that the idea of colon as an indicator of textual reading is different from the classical sense of proportion. The aim of textual reading is neither to decipher the harmonic proportions underlying any building nor to relate it to an apriori ideal. In the textual-analytical model the colon is utilized to determine “displacements” as mentioned earlier. The mathematical relations defined by the colon makes the reader conceive the essence of what has been

¹⁴¹ Judi Loach, “Le Corbusier and the Creative Use of Mathematics,” BJHS 31 (1998):185.

¹⁴² Ibid, 197

divorced from its aesthetic and stylistic connotations and displaced from its original context. Such displacements marked by the colon, open the way for intentional and creative misreading.

3.4.2 Summary Sequence

The term summary sequence introduced by Hildner is another significant indicator of textual-analytical model. The summary sequence is a form of numerical sequence, yet, while a numerical sequence is a tool of conventional formal analysis, this thesis argues that the summary sequence is an indicator of the textual-analytical model because it is associated with the concept “memorability”. The elegance of the numbers in the series determines the degree of memorability of architecture. The summary sequence is textual because it is produced by the erasure of the real numbers constituting the series and applying an operation that would make the numbers more elegant. In Hildner’s reading of Garches, such operation is “doubling”, yet other operations may also be applied in other buildings. When applied to the numbers, such operations transform the series into another one, changing what is called “1”, and, as a result, the dimensional datum of the building. By redefining the dimensional datum, the summary sequence introduces a new way of reading.

3.4.3 Dimensional Datum

Another indicator for the textual-analytical model is the dimensional datum. The dimensional datum is the basis for understanding the components of the building. Each building has its own dimensional datum or module which can be called “1” in the summary sequence. This idea of a dimensional module can also be discussed in relation to Le Corbusier’s *Modulor*. According to Le Corbusier, architecture depends upon geometry, yet geometry alone is not enough to ensure the unity of any architecture. To ensure such unity, a minimum unit or a module through the multiplication of which the other components may be produced is also necessary. In

order to bring buildings to human scale, Le Corbusier introduced the *Modulor*, from which dimensional units related with the human body can be derived: such as the dimension of a foot, a finger, etc.¹⁴³

Loach explains that the invention of the Modulor took place in 1940s, after Le Corbusier lost his interest in town planning and returned to the issue of proportion:

From 1942, however, he returned to the issue of proportion and dimension, this time determined to invent a system, eventually to be called the Modulor, which would combine abstract numerical laws underlying nature with contemporary anthropometrics and ergonomics, thus reconciling the universal with the particular, and the timeless –both in the senses of ahistorical and eternal- with the present.¹⁴⁴

The Modulor was not only expected to introduce human scale to the building but ensure its unity by generating regulating lines, which organize the components of the building.

The Modulor and the idea of dimensional datum have a common property: both depend on the idea that any building originates from a smallest unit, which can be multiplied to produce a greater whole. In Modulor, the unit is derived from the human body, whereas in the concept of dimensional datum, the unit is derived from the building itself. The minimum unit of the Modulor does not necessarily correspond to the dimensional datum. That is to say, although Le Corbusier used the Modulor in Villa Stein at Garches, the dimensional datum or the number “1” is not equal to the dimensions of foot in human body. Another difference is that, while the numeric correspondence of dimension are significant in Modular since it gives scale to the building, in dimensional datum the numeric correspondence of number “1” is not as important.

¹⁴³ Ibid, 198

¹⁴⁴ Ibid, 200.

3.4.4 Grid

The grid can be considered as another indicator of the textual-analytical model. While the grid is a generator of systems, it originates from the dimensional datum. The dimensional datum initiates derivation of invisible lines, the superposition of which produces a grid. As previously argued, a two dimensional grid has one vertical and one horizontal direction. These invisible lines of the grid can be considered as regulating lines with reference to Le Corbusier:

The regulating lines is a geometrical or arithmetical means of bringing great precision in the determination of proportions of a composition in the plastic arts (in the domain of architecture, painting, or sculpture)¹⁴⁵

However, Roger Herz-Fischler argues that Le Corbusier had an intuitive approach to design from the beginning and applied the regulating lines to “improve and refine the original product”.¹⁴⁶ Whether he used the grid in the beginning or not is not the scope of this study, due to the fact that intentionality is not a concern of textual reading. What is significant in terms of regulating lines is that the two perpendicular directions initiated by the abscissas and the ordinate define the stasis or extension of the building. An interpretation of regulating lines as limiting and directing stasis, extension or rotation is considered textual rather than formal, whereas the derivation of these lines is in itself formal.

3.4.5 Field

Another indicator of the textual-analytical model can be considered the field, which is defined by the grid. The difference between the grid and the field is that, the field can be considered a vector space. The directionality of the lines of the grid and the modules defines the direction of stasis, extension, and rotation. The field is not limited to the

¹⁴⁵ Roger Herz-Fischler, “Le Corbusier’s Regulating Lines for the Villa at Garches (1927) and Other Early Works”, *JSAH* 43 no.1 (1984): 59. Citations from TR4 and Precisions.

¹⁴⁶ Ibid.

area on which the building is situated. In this sense, as Hildner introduces the terms, the field can be thought of in two different modes: the primary field of enclosure and the extended field. While the primary field of enclosure denotes the area on which the enclosed spaces are situated, the extended field denotes the surrounding parts which are not connected to the main volume. Different readings of the primary field of enclosure and the extended field based on dimensional datum produce multiple readings.

CHAPTER 4

TEXTUAL-TRANSFORMATIONAL MODEL

This chapter introduces textual-transformational model as another form of textual reading. In order to develop the basis of a textual-transformational model, it is necessary to refer to formal transformation and the relationship between generic and specific form along with the properties of generic form: volume, movement, mass, and surface. Making these definitions with reference to Peter Eisenman's dissertation *Formal Basis of Modern Architecture*, the study moves towards textual-transformation with reference to Eisenman's definition of transformation in his analysis of Casa del Fascio in *Giuseppe Terragni: Transformations, Decompositions, Critiques*. [Figure 10, 11, 12] Referring to Eisenman's analysis, this thesis aims at developing the fundamental properties and indicators of textual-transformational model.



Figure 10. Casa del Fascio, Como, Italy. Photo by the author



Figure 11. Inner Volume of Casa del Fascio. Photo by the author



Figure 12. Casa del Fascio, Southeast Façade. Photo by the author

4.1 Transformation: Definition

The word transformation is used in general to denote a complete, major or radical change in someone's or something's appearance, character or form.¹⁴⁷ It may indicate "the act, process or instance of transforming".¹⁴⁸ When it indicates the act, it refers to one or a group of operations which results in the change of form. To be considered as a transformative act, the transformation should result in a major change in form rather than a minor one. When the word transformation indicates the process, it denotes the time dimension of transformation, that is to say the timeframes that appear during the change. As the process, it includes both the minor and major changes in form. When the word transformation indicates the instance, it denotes each individual state that is produced by one or a group of actions. In order to call an individual state an instance it should be separable from others in terms of its distinguishing features, yet display a common essence.

Besides its general use, transformation has specific connotations in certain fields. In biology the word indicates the change of the structure of the cell (genetic modification) and the processes by which genetic material is transferred between cells.¹⁴⁹ Through transformation a cell may convert from a harmless form to a disease-causing form or vice versa. In projective geometry the word denotes alterative processes through which figures could be moved around in three-dimensional space. Such transformative processes in Euclidean geometry include "rotations", "reflections", "translations" or a combination of these processes through which an instance of the original geometry is produced.¹⁵⁰ What is significant is that these instances produced by different transformative processes still display common traits which are the essential properties

¹⁴⁷ For dictionary definitions of the word transformation see www.merriam-webster.com, www.collinsdictionary.com, www.dictionary.cambridge.org

¹⁴⁸ www.merriam-webster.com.

¹⁴⁹ Encyclopaedia Britannica, www.britannica.com.

¹⁵⁰ Ibid.

of Euclidean Geometry. Another use of the word is in linear algebra, in which transformation denotes “the rule for changing one geometric figure such as a matrix or a vector into another one”, while using a specific formula.¹⁵¹

Another significant use of the word is in linguistics. Transformational grammar which is also called generative grammar, is a form of language analysis which focuses on the relationship between the elements of a sentence. The relationship between these elements is constructed through certain rules and processes specific to each language. Zellig Harris was one of the pioneers of transformational grammar in linguistics; however the subject was further developed by his student Noam Chomsky who differentiates between surface structure and deep structure in the study of syntax. While the surface structure is generated by the transformational component of syntax, the deep structure is generated by the base component. The deep structure determines the meaning of the sentence, whereas surface structure determines its sound.¹⁵² The active and passive form of sentences with the same meaning is an example of transformational grammar in which both the active and passive forms are surface structures which are derived from the same deep structure. Chomsky’s syntactic structures in linguistics constitute an inspirational source for syntactic structures in architecture as well.

In “From Object to Relationship II: Casa Giuliani Frigerio” Peter Eisenman discusses the syntactic aspect of architecture with reference to Chomsky’s transformational grammar.¹⁵³ According to Eisenman both language and architecture depend on three semiotic categories for existence and operation: “pragmatics, semantics and syntactics”.¹⁵⁴ While pragmatics denotes “the relation of form to function or

¹⁵¹ Ibid.

¹⁵² John R. Searle, “Chomsky’s Revolution in Linguistics,” *The New York Review of Books* (1972).

¹⁵³ Peter Eisenman, “From Object to Relationship II: Casa Giuliani Frigerio: Giuseppe Terragni Casa del Fascio,” *Perspecta* 13/14 (1971): 36-65.

¹⁵⁴ Ibid., 39.

technology”, semantics denotes “the relation of form to meaning and iconography”. According to Eisenman architecture, like language, requires a syntactic component through which this meaning could be mediated. Therefore, influenced by Chomsky’s work, Eisenman makes an inquiry into the syntactic aspects of architectural form and borrows two main ideas from Chomsky: the separation of syntax from semantics and the separation of surface syntax from deep level syntax.¹⁵⁵

Eisenman argues that, like language, architecture involves surface and deep aspects:

There is a surface aspect essentially concerned with the sensual qualities of the object; that is aspects of its surface, texture, color, shape, which engender responses that are essentially perceptual. There is also a deep aspect concerned with conceptual relationships which are not sensually perceived; such as frontality, obliqueness, recession, elongation, compression, and shear, which are understood in the mind. These are attributes which accrue to *relationships between objects*, rather than to physical presence of the objects themselves.¹⁵⁶

According to Eisenman, “flatness is a characteristic of an object” which makes it a surface aspect, while “frontality is an attribute which an object may assume in relation to another object or in relation to a preferred viewpoint of an object” making it a deep aspect.¹⁵⁷

Like the deep structure in language, the deep structure in architecture is a theoretical construct. It is not explicit as surface structure:

Deep structures are generated by a base system of rules which are concerned with underlying relations with an abstract order. A deep structure is implicit only; it is not expressed but is only represented in the mind. *A deep structure may not necessarily display any similarity to the surface structure.*¹⁵⁸

¹⁵⁵ Thomas Patin, “From Deep Structure to an Architecture in Suspense: Peter Eisenman, Structuralism, and Deconstruction”, *JAE* 47, no.2 (1993): 88-100.

¹⁵⁶ Eisenman, “From Object to Relationship”, 39. Emphasis added.

¹⁵⁷ Ibid.

¹⁵⁸ Ibid. Emphasis added.

Since a deep structure is implicit and not necessarily similar to surface structure, Eisenman aims at “exploring the nature of the relationship between the surface and deep aspects of architecture” and “developing transformational methods for deriving and relating specific forms to formal universals”.¹⁵⁹ These formal universals correspond to what Eisenman calls “generic form”.

4.2 Types of Architectural Form: Generic and Specific

In his dissertation Eisenman introduces two types of architectural form: generic and specific. While a building may be defined as a specific form, basic solids such as the cube, prism, sphere or the cylinder may be defined as a generic form. Eisenman differentiates between generic and specific form:

The term generic form is here understood to mean form thought of in a Platonic sense, as *a definable entity within its own inherent laws*. The term specific form on the other hand, can be thought of as the *physical configuration realized in response to a specific intent and function*.¹⁶⁰

Generic form in the Platonic sense such as the cube, is transcendent and universal in nature, whereas specific form is singular and particular.

Understanding intent and function is not enough for full comprehension of specific form and buildings with similar functions may root from different generic forms. In Eisenman’s words:

Since no one function can do more than suggest a specific form (i.e. it cannot determine it) in other words there is no one form for any function, specific form can be considered to be of a *relative* nature (relative, that is, to a particular interpretation of a programme) and therefore of a lesser degree of importance in the hierarchy than generic form.¹⁶¹

¹⁵⁹ Ibid., 40.

¹⁶⁰ Eisenman, *The Formal Basis of Modern Architecture*, 33-35.

¹⁶¹ Ibid., 35-37.

While generic form is independent, specific form is dependent on intent and function which are relative and subjective. Since generic form is absolute and objective, it is superior to specific form, therefore each specific form can only be understood in relation to the generic form to which it refers. Eisenman calls these generic forms “the generic antecedent of a specific form” and argues that “the comprehensibility of the generic antecedent is the necessary precondition for the clarity of the intent and function of the specific form”.¹⁶²

According to Eisenman, each building as a specific form has a generic antecedent which associates the formal aspects of the specific form to a more basic state which is static, unchanging and objective:

A building which is realized as a specific form must have a generic antecedent. This antecedent relates to the formal aspects of that building: *the elementary state of that building and the essence of that state*. This essence, of any form must be abstracted, understood and ordered before any valid specific condition can be obtained. The ordering of the specific state develops from the generic form which in itself has an inherent or implied order.¹⁶³

For Eisenman, there are only two categories of generic form: linear and centroidal. Each generic form or basic solid fits into either category. In order to fully explain a specific form, it is necessary to understand the inherent properties lying under the generic form whether it is linear such as a cylinder or a prism, or centroidal, such as a cube or a sphere.¹⁶⁴

Eisenman explains the properties of generic architectural form under four categories: volume, mass, surface and movement. Volume is described as “defined, contained and particularized space”, mass is defined as “quantity of matter that a body contains, a dense aggregation”, surface is defined as either “the last layer of volume” (surface

¹⁶² Ibid., 81.

¹⁶³ Ibid.,. Emphasis added.

¹⁶⁴ Ibid., 35.

skin), or “infinite number of surfaces or planes” (surface plane), and movement is defined as “circulation of people in any architectural environment”.¹⁶⁵ Among these categories, volume is the essential property of all architectural form; mass, surface, and movement provides limitations to volumetric entities and can only be discussed in relation to a volume. Mass and surface are related with the containment of space; movement is related with experience. While volume and movement are considered interrelated, mass and surface are antithetical to each other.

4.3 Casa Del Fascio: Transformation of the Generic

In the first section of *Giuseppe Terragni: Transformations, Decompositions, and Critiques*, Eisenman analyzes the Casa del Fascio- the Italian fascist party headquarters in Como. The method Eisenman uses for the analysis of the Casa del Fascio is transformation, which denotes a step-by-step evolution of a primary form in which the traces of changes are “active and apparent in the final, built form”:

The term transformation is applied generally to anything that undergoes a process of change. As applied to the design process, the term may refer to the steps by which a project is brought to its final form. It is a term frequently used by architects and critics to imply that architecture has evolved through an orderly, step-by-step process, suggesting a rationality and a narrative in what has been done. It often serves to rationalize retrospectively a design method determined by functional and aesthetic criteria.¹⁶⁶

Although Eisenman uses the word transformation, he differentiates his method from the traditional use of the word in terms of linearity and causality.

According to Eisenman, the traditional notion of transformation departs from the view that the architect is a creative subject who has the conception of the final form in his/her mind in the beginning of the design process. That is to say “ideas originate in

¹⁶⁵ Ibid.

¹⁶⁶ Eisenman, *Giuseppe Terragni: Transformations, Decompositions, Critiques*, 23.

an anthropocentric conception achieved by a creative subject, derived from functional concerns in more or less pragmatic ways”.¹⁶⁷ Therefore the idea is that what the architect draws in his/her preliminary sketch evolves into the built form through a series of design decisions which make up a linear process. In this traditional view transformation is linear and proceeds with a predictable way of progression and results in a causal link to “function” and “intent”. Such traditional conception of transformation can be exemplified with the Ecole des Beaux Arts tradition in which the students were evaluated according to the criteria of consistency between preliminary sketch and the final project. In Beaux Arts “[t]he student had to trace his sketch design and if the final building departed from this in any significant way, he was disqualified”.¹⁶⁸

According to Eisenman, by putting the traditional view aside, it is possible to propose a less linear type of transformation which cannot be reversed but only be traced back. That is to say, although it is not possible to speak of causality in transformation, it is possible to follow the consecutive steps of evolution by tracing the continuity of notations seen in the end product. The notations to be followed can be any component of the built form including the window reveals, mullions, joints or openings which are marked by their size, shape, and position.¹⁶⁹ Such a conception of transformation as a non-linear process is different from the traditional view in that it does not require any causal links. Therefore, as opposed to the traditional view of transformation which is formal, Eisenman’s view of transformation is considered textual.

As a built form and complex entity when the Casa del Fascio is reduced to its most simple geometric configuration, it seems to have originated from a cubic form. In order to understand the specific form of the Casa del Fascio, it is first necessary to understand

¹⁶⁷ Ibid.

¹⁶⁸ Geoffrey Broadbent, “Architectural Education” in Martin Pearce and Maggie Toy ed. *Educating Architects* (London: Academy Editions, 1995): 15-16

¹⁶⁹ Eisenman, *Giuseppe Terragni: Transformations, Decompositions, Critiques*, 10.

the cube as its generic antecedent. The primary property of cube as a generic form is that it is centroidal:

The cube as a centroidal form evolves equally in a vertical and horizontal direction from a defined centrum. This quality is primary to the understanding of it. Of second importance is the equality of vertical and horizontal axes, the equality of all surfaces, the diagonal axes, and the location of all corners. But the essential point to note here is that these properties of the cube, as of any generic form, stand above any aesthetic preference. They are, quite simply, inherent characteristics which can only be considered in an objective sense, they establish the absolute nature of generic form, and by definition its transcendence over specific form.¹⁷⁰

The cube has its own internal dynamic which is independent from intent and function. Its centrality is unquestionable, objective and a-priori. The secondary properties suggested by the primary property of centrality such as the equality of axes and equality of sides constitute the conceptual basis of the cube as a generic form.

Yet according to Eisenman there occurs two possible readings of the cube as a solid condition and a void condition. [Figure 13] While the solid condition suggests a strategy of subtraction, the void condition suggests addition:

[T]he cube may be said to have two initial conditions: solid and void. Each suggests a different potential evolution of form. The solid condition suggests a strategy of subtraction by which an original form is eroded to produce a figure. The void condition suggests a strategy of addition by which an original void is added to in order to produce a figure. Traditionally, such additive and subtractive processes mark a building's internal history.¹⁷¹

Departing from these two initial conditions, Eisenman attains primary geometrical abstractions of two different "types": void condition referring to the Renaissance palazzo and the solid condition referring to the traditional courtyard. [Figure 14]

¹⁷⁰ Eisenman, *The Formal Basis of Modern Architecture*, 35.

¹⁷¹ Eisenman, *Giuseppe Terragni: Transformations, Decompositions, Critiques*, 27.

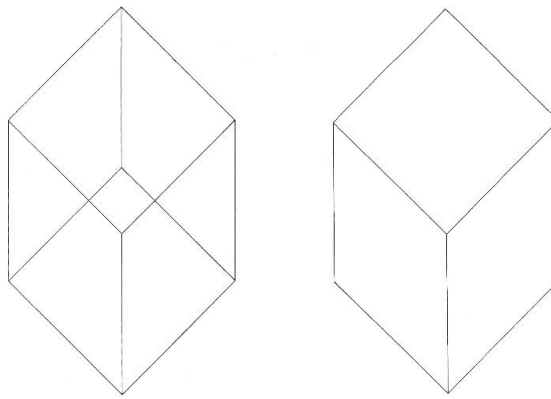


Figure 13. Axonometric diagrams showing the initial condition of the cube as solid and void.
 [Peter Eisenman, *Giuseppe Terragni: Transformations, Decompositions, Critiques*, 27]

However, here the solid and void condition only denote the primary geometrical configuration of the type rather than its historical references:

Terragni utilizes the *typology* of the town hall and the Renaissance palazzo, he manages simultaneously to reinforce these relationships between historical archetypes and Fascism and to disengage the work from them. He does this in part by going beyond a simple representation or updating of the inherited configuration of the *palazzo type*; instead, he uses this type to initiate processes that intend neither to justify the traditional type nor to rework the type within the parameters of that typology.¹⁷²

The conceptualization of type in relation to solid and void condition liberates the type from its functional, historical, and, aesthetic connotations while changing its status to a fruitful origin of transformative processes.

¹⁷² Ibid., 9. Emphasis added.

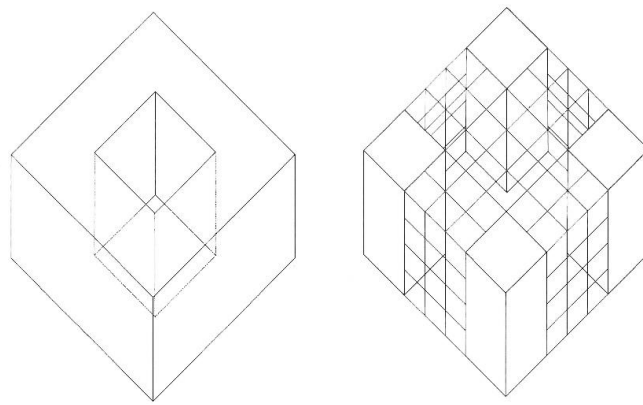


Figure 14. Axonometric diagram showing a four-square corner-tower base condition as a void that is filled in by gridded cage and traditional courtyard scheme, a square-doughnut base condition where the center has been hollowed out as a subtractive condition. [Peter Eisenman, Giuseppe Terragni: *Transformations, Decompositions, Critiques*, 29]

The dual reading of the cube either as solid or void produces an ambiguity which Eisenman calls the “alternating base condition”. The building is sometimes read “as a fragment of a solid whole” and sometimes as “an empty matrix that has been built up”:

The additive, or void condition, contains a typological reference to the Renaissance palazzo. In this reading, four square corner towers are seen as a base condition from which the remainder of an initially void structure, including the center, is filled in by a gridded cage. At the same time, through a different reading of the same typological origin, the building can be said to contain a reference to a traditional courtyard scheme, a square doughnut, in which the hypothetically solid center of the block has been hollowed out, leaving a solid perimeter; this can be read as a subtractive condition.¹⁷³

Although both typologies are derived as a response to the problem of arranging small units around a gathering area (intent and function), they originate from different base conditions.

¹⁷³ Ibid, 29.

There is also the perceptual basis of the cube as a generic form which can be analyzed under four categories which are the properties of the generic architectural form: volume, mass, surface, and movement.¹⁷⁴ Such perceptual basis will be discussed in the following sections with reference to the Casa del Fascio. Although Eisenman do not discuss these properties within the case of the Casa del Fascio, this thesis argues that such discussion is essential for the understanding of textual transformation because it reveals the ambiguities and anomalies underlying the generic form. Such ambiguities and anomalies constitute the precondition of textual reading.

4.4 Casa del Fascio: Volume and Movement

While volume is considered the generating property of architectural form, architectural form can be considered as a volume which exists in space. Thus, architectural form can never be thought without volume. Volume either may be internal or external. Internal volume is assumed to be positive because of its containment and limitations, whereas external volume is assumed to be negative because of its lack of containment and limitations. While the internal volume is considered concave, the external volume is considered convex. Such convex qualities displayed by internal volume can be said to correspond to the characteristics of mass as a property of generic architectural form.¹⁷⁵

When the Casa del Fascio is analyzed in terms of its volumetric properties, it is seen that two different base conditions display different qualities. The void condition can be said to be composed of 4 volumetric units located on the corners, producing an activated space between the volumes making it a negative volume. The solid condition, on the other hand, can be said to be composed of a single volume from which the central volume is subtracted. In this solid condition although the central void seems to

¹⁷⁴ Eisenman, *The Formal Basis of Modern Architecture*, 95.

¹⁷⁵ Ibid., 59.

be a negative volume since it is external, its qualities of containment and limitations cause an ambiguity in definition. The convex qualities of the external volume cause it to be perceived as mass.

The most significant issue related with volume is that it is always controlled by a grid. According to Eisenman “[a]n implied or actual grid provides the matrix for ordering any volumetric entity.”¹⁷⁶ The grid is the guarantor of order and “[t]he concept of a spatial, three-dimensional, or Cartesian grid thought of as a continuum provides the absolute reference for architectural form, whether generic or specific.”¹⁷⁷ The grid is an abstract entity with one horizontal, two vertical coordinates which are perpendicular to each other. While the horizontal plane is perceived in reference to the line of horizon, the vertical coordinates are perceived in relation to gravity. According to Eisenman, “[e]verything is seen in some relation to this grid whether it be man-made or natural.”¹⁷⁸ Besides mass, surface and movement, the grid constitutes another condition of limiting volume.

According to Eisenman, “any linear or centroidal form can be comprehended with reference to the spatial grid”, regardless of intent and function.¹⁷⁹ All platonic solids can be analyzed in terms of horizontal and vertical axes in accordance with their geometric properties. While a linear form such as a cylinder has one dominant axis, a centroidal form such as the sphere has no dominant axis since it is made of 3 equal axes that are not hierarchical to each other. The dominant axis is the absolute of the grid whether it is horizontal or vertical. While the vertical absolute can be exemplified by a tree, the horizontal absolute can be exemplified by the landscape. Eisenman argues that “no condition of total order is possible if neither the horizontal nor the

¹⁷⁶ Ibid., 63.

¹⁷⁷ Ibid.

¹⁷⁸ Ibid., 65.

¹⁷⁹ Ibid..

vertical is treated as an absolute since any resultant form will have no framework of reference”.¹⁸⁰

When the generic antecedent of the Casa del Fascio is analyzed through a spatial grid it is seen that the alternating base condition also alters the way the grid is read. While the grid is more explicit in the void condition, it is more implicit in the solid one. That is to say, how additive processes are ruled by the grid is more easily perceived in the palazzo type scheme when compared to the subtractive process in the courtyard scheme. Whether implicit or explicit, in both conditions there exists a three dimensional grid with reference to which the generic form evolves. However the two conditions display different qualities in terms of the planar absolute. In the palazzo type scheme when the grid is made invisible, four volumes on the corners seem to be growing up from the ground each in a longitudinal manner, rendering the ground plane as the absolute of the grid. Yet when the caged grid is made visible, the front façade also starts to be read as an absolute. In the courtyard scheme the subtractive operation seems to be realized with reference to the ground plane while the horizontal plane maintains its continuity.

Another property of generic architectural form which is closely related to volume is movement, because “[v]olume cannot be thought of without movement into it”.¹⁸¹ According to Eisenman movement is one of the most significant properties of generic architectural form since it is directly related with experience:

Movement is considered to be a factor that is external to the fabric of the building; it is not a quality of the work itself, but rather a pattern of behavior which the building enforces on the individual.¹⁸²

Therefore, it is not possible to fully comprehend a generic form solely by looking at its volumetric properties. Although volume is considered within itself, without

¹⁸⁰ Ibid., 71.

¹⁸¹ Ibid., 73.

¹⁸² Ibid., 71.

movement such dynamism is devoid of any time dimension. Movement as a geometric vector or an external force has size, intensity and direction, which alters how the generic form is conceived. In Eisenman's words, movement "affects and modifies the equilibrium of generic form".¹⁸³ In this respect, how movement affects the conception of volume in the Casa del Fascio should be analyzed.

In order to understand the effects of movement in the Casa del Fascio, it is necessary to focus on the entry of the building. [Figure 15] An entry is a form of transition which establishes the relationship between inside and outside as well as the relationship between public and private.¹⁸⁴ Every building necessarily possesses an entry whether in the form of a single element –the door- or in the form of a transition space. All entries are naturally functional since their main reason for existence is providing access from outside to inside. Although all entries are functional, that is to say they serve for a specific purpose, not all entries are textual:

While transition is a factor related to all actual doors, it is more fundamentally related to the notion of an implied entry. While any actual door in a wall provides physical access, it does not normally generate a textual reading other than its functioning".¹⁸⁵

Eisenman argues that the entry of the Casa del Fascio is both functional and textual.

However at this point it is essential to differentiate between two types of function: utilitarian function which is physical and symbolic function which is metaphysical.¹⁸⁶ While "the response to utilitarian function tends to produce specific form", "the response to symbolic function tends to produce generic form".¹⁸⁷ Eisenman exemplifies this separation with the concept "stair". The stair is a pragmatic tool

¹⁸³ Ibid., 73.

¹⁸⁴ Eisenman, *Giuseppe Terragni: Transformations, Decompositions, Critiques*, 107.

¹⁸⁵ Ibid.

¹⁸⁶ Eisenman, *The Formal Basis of Modern Architecture*, 39.

¹⁸⁷ Ibid., 43.

connecting different levels which is a utilitarian function. In utilitarian sense, the stair ends up with a specific form. However the stair may also be considered as a transition space connecting different spaces. Stairs used as a transition space does not necessarily end up with a specific form. The same argument can be translated to the concept of an entry. When the entry responds to utilitarian function, it is a simple door which results in a specific form. When the entry responds to a symbolic function, it can be considered as a transition space which does not have constant physical properties. In this sense, the entry of the Casa del Fascio is not only utilitarian but also symbolic, not only functional but also textual.

Although the location of the entry is suggested by the plan of the piazza, there is no direct causal link between the physical context and the building's form. [Figure 16] It is not the context which determines the movement within the volumetric entity of the Casa del Fascio, but the entry:

The plane of entry generally determines the *dominant grain of a building*. In the Casa del Fascio, the sequence of vertical layers is developed orthogonally to the entry vector. This is because the movement is most perceivable, in terms of depth, when it runs orthogonal to, or against the grain of, objects. If space is thought of as a block of wood, it is immediately apparent that movement parallel to or along the grain is difficult to measure since nothing marks progression. Movement across the grain, however, produces a perception of incremental layering and depth. In the Casa del Fascio, internal movement across the front-back grain is marked by means of a series of implied planes moving from front to back- from the piazza through the internal void to the rear plane of the building.¹⁸⁸

In the Casa del Fascio the entry acts as a generator of movement which shifts the reading of the form from a mass to a surface composed of several volumetric layers. That is to say the entry is one of the catalysts of the alternating reading of the Casa del Fascio as a mass and a surface.

¹⁸⁸ Eisenman, *Giuseppe Terragni: Transformations, Decompositions, Critiques*, 107. Emphasis added.

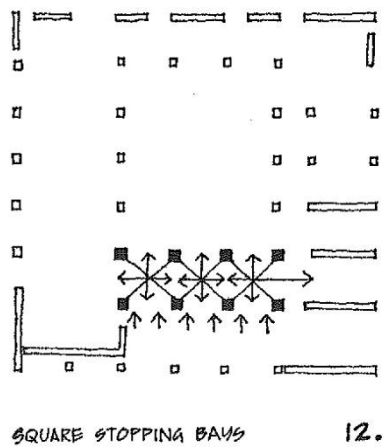
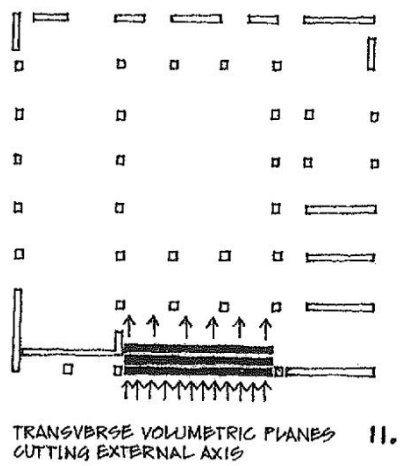
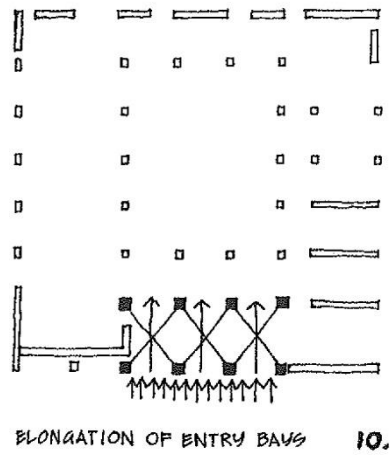


Figure 15. The entry and movement [Peter Eisenman, *The Formal Basis of Modern Architecture* (Ph.D. diss., Trinity College, University of Cambridge, 1963, 99.)]

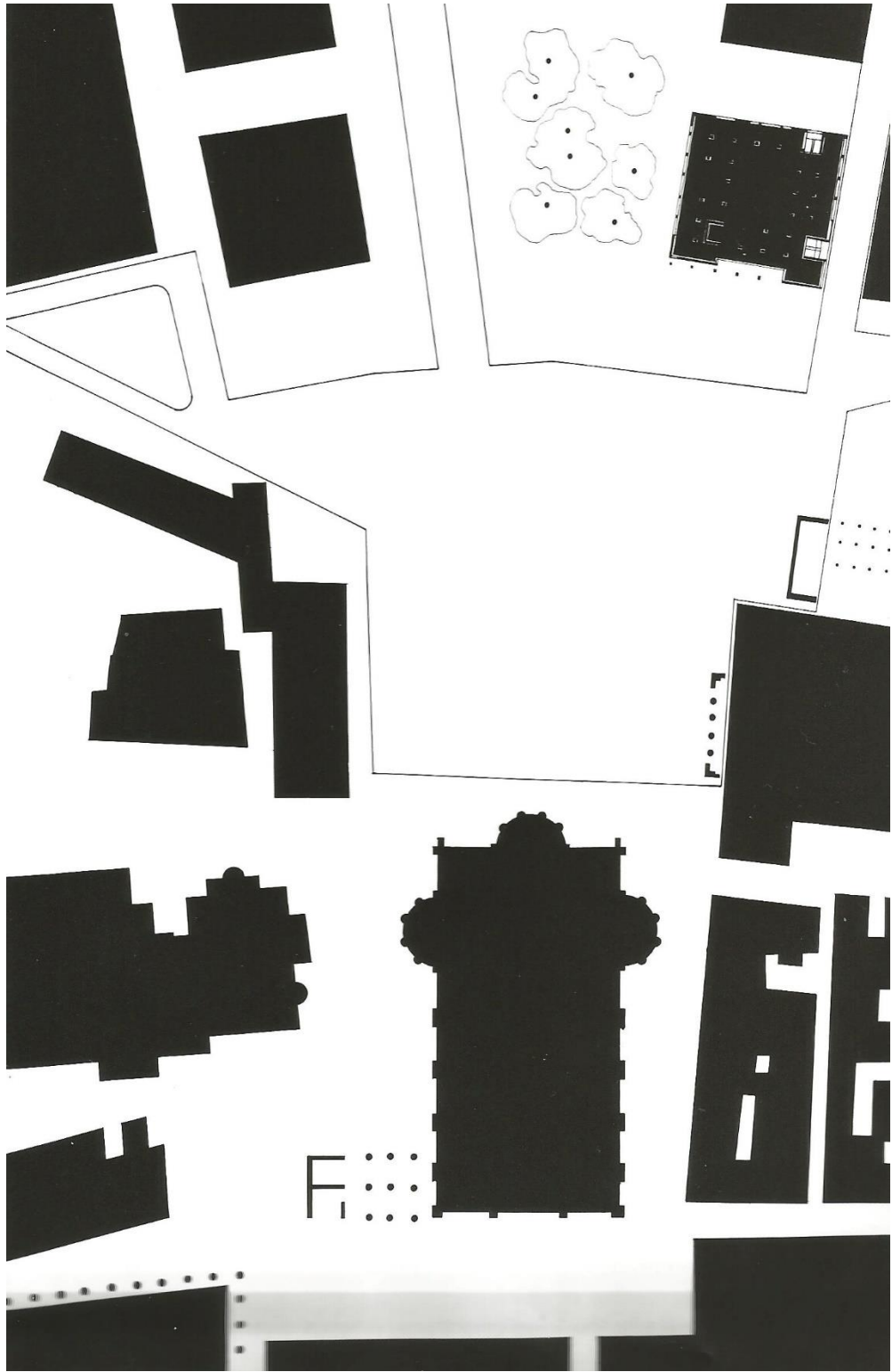


Figure 16. Site plan of Casa del Fascio [Peter Eisenman, *Giuseppe Terragni: Transformations, Decompositions, Critiques*, 28]

4.5 Casa del Fascio: Mass and Surface

Besides movement mass and surface are other limiting conditions of volume. Mass can be defined as the “state of an architectural composition, that appears to have been a solid in its original state, but which has been corroded and eaten away to produce its resultant form”.¹⁸⁹ Mass corresponds to the solid condition of generic form, and it is produced by subtractive processes. Surface, on the other hand has two different conditions: surface skin which is the last layer of volume and surface plane which is a series of volumetric planes. It is the surface plane which is antithetical to mass in that it is made of planes brought together with an additive process. Eisenman argues that the Casa del Fascio can be read both as mass and surface. [Figure 17]

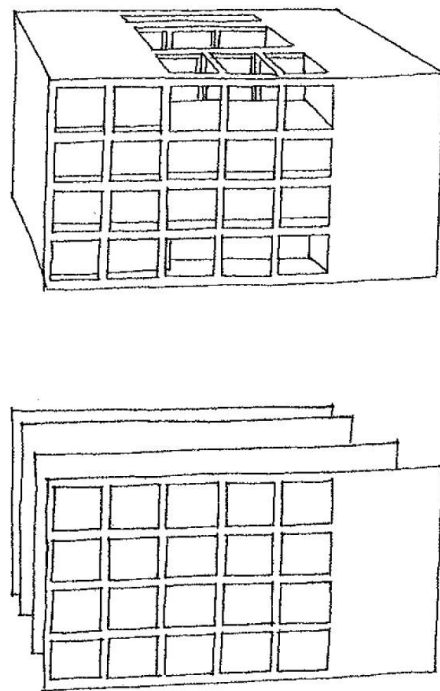


Figure 17. Casa del Fascio as mass and surface plane [Peter Eisenman, *The Formal Basis of Modern Architecture* (Ph.D. diss., Trinity College, University of Cambridge, 1963, 49.)]

¹⁸⁹ Eisenman, *The Formal Basis of Modern Architecture*, 75.

When the Casa del Fascio is read as mass, the building seems to be produced from a single block which is hollowed out in the center. The continuity of four facades expresses a single mass; they are not read as separate planes. As a solid condition, mass displays the same characteristics as its generic antecedent, the cube. It is centroidal and there is no effect of a directional vector to disturb its centrality. Since there is no vector disturbing centrality, the Casa del Fascio as a mass can be said to carry the properties of the centroidal, such as a cube having equal length of sides.

When the Casa del Fascio is read as surface plane, the building seems to be composed of multiple volumetric planes coming one after the other. Such reading of surface plane is supported by the existence of the entry vector which initiates a dominant grain through which the volume can be perceived in depth. Front and rear facades are perpendicular to this dominant grain, whereas the side facades are parallel. The front façade acts as the first layer of transverse planes and the rear façade as the last. As the planar condition, surface displays different characteristics from its generic antecedent. Since it evolves from a directional vector, it is linear in nature. That is to say, it is not central as its generic antecedent, the cube. Although the plan is a square in geometric terms, the fact that there is one major access (the entry), disturbs the centrality of volume turning it into a linear succession of planes.

However, Eisenman does not read the Casa del Fascio as surface skin which is the last layer of volume, he only reads it as surface plane. Eisenman does not explain why the Casa del Fascio is not read as surface skin but as mass and surface plane. If it would have been read as surface skin, the Casa del Fascio would display the characteristics of the centroidal because “wrapping quality of a skin presupposes some central element which is to be contained”.¹⁹⁰ That is to say while surface plane is linear in nature, surface skin is centroidal in nature. The property is not inherent to the generic antecedent but to the surface quality which is defined by movement.

¹⁹⁰ Ibid., 81.

This dual reading of the Casa del Fascio as mass and surface is a “purposeful ambiguity” which is the precondition of textual reading. Although the main assumption of formal analysis is the reference to a generic antecedent, it is seen that the combination of volume, mass, surface, and movement as properties of generic architectural form may result in tension, where the resultant form does not resemble its generic antecedent. According to Eisenman, differentiation between mass, surface skin and surface plane depends on the placement and “the size of openings”, “treatment of corner condition”, and “the material used,” therefore resolving such ambiguity is only possible through a textual reading of the facades.

4.6 Indicators of Textual-Transformational Model

What differentiates textual transformation from formal transformation is that in the former “each stage records a residue of elements from a previous stage”.¹⁹¹ While formal transformation is linear, and its results predictable, textual transformation is nonlinear. [Figure 18] As a nonlinear process textual transformation cannot be reversed but only be traced back. The residual overlaps in textual transformation act as traces, which indicate “the marking of an absence of a stable or fixed relationship to a single set of primary and thus transcendental forms”.¹⁹² Since there are no stable relations between the generic form and specific form, Eisenman argues that transformative processes can be read through a building’s façade. In general, a façade may either disguise or reveal internal organization. Yet, one of the major assumptions of the textual-transformational model is that the façade is “the registration of the generation of the interior, as opposed to its spatial disposition”.¹⁹³

¹⁹¹ Eisenman, *Giuseppe Terragni: Transformations, Decompositions, Critiques*, 27.

¹⁹² *Ibid.*, 29.

¹⁹³ *Ibid.*, 34.

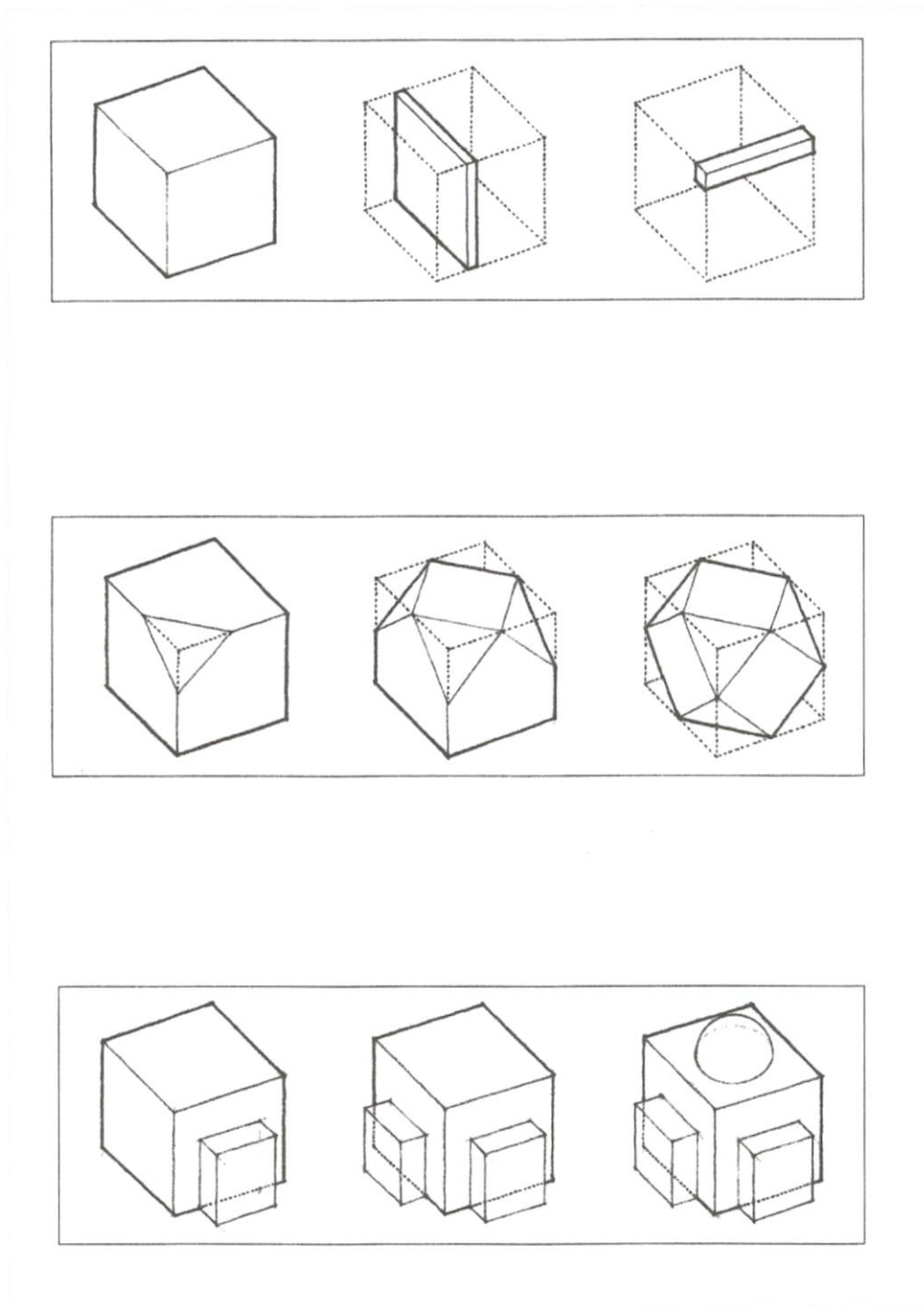


Figure 18. Transformation of Form and Formal Transformation: Dimensional, Subtractive and Additive [Francis D. K. Ching, *Architecture: Form, Space, and Order*, 50]

According to Eisenman façade has certain characteristics, which renders it significant in understanding a building. Firstly, different from an elevation, which is a plane recording factual information like plan and section, a façade is a “three-dimensional entity with its own plan and section”:

Colin Rowe has made the important distinction between the idea of façade and the idea of elevation. Elevation, according to Rowe, is merely the literal or technical display of interior arrangements projected onto the outer surface of a building. In this sense, elevation is much like a section or a plan in that it records factual information. A façade for Rowe differs from an elevation in that the former manifests what Rowe calls character- the symbolic and iconic meanings, such as secular and religious, and public and private, that are not contained in the idea of elevation.¹⁹⁴

Secondly, a façade has a different relationship to “time” when compared to plan and section. While the plan and section can only be perceived through experience and cannot actually be seen, the façade is both perceived in immediate time and be seen.¹⁹⁵ In this sense Eisenman argues that “the façade has simultaneous existence as physicality and abstraction, with both states equally important to its reading”.¹⁹⁶

On the basis of Eisenman’s emphasis on façade, this thesis aims at formulating certain “indicators” of textual transformation. These indicators are: notation, corner, datum, entry and alphabetical sequence. [Figure 19]

¹⁹⁴ Ibid., 33-34.

¹⁹⁵ Ibid.

¹⁹⁶ Ibid.

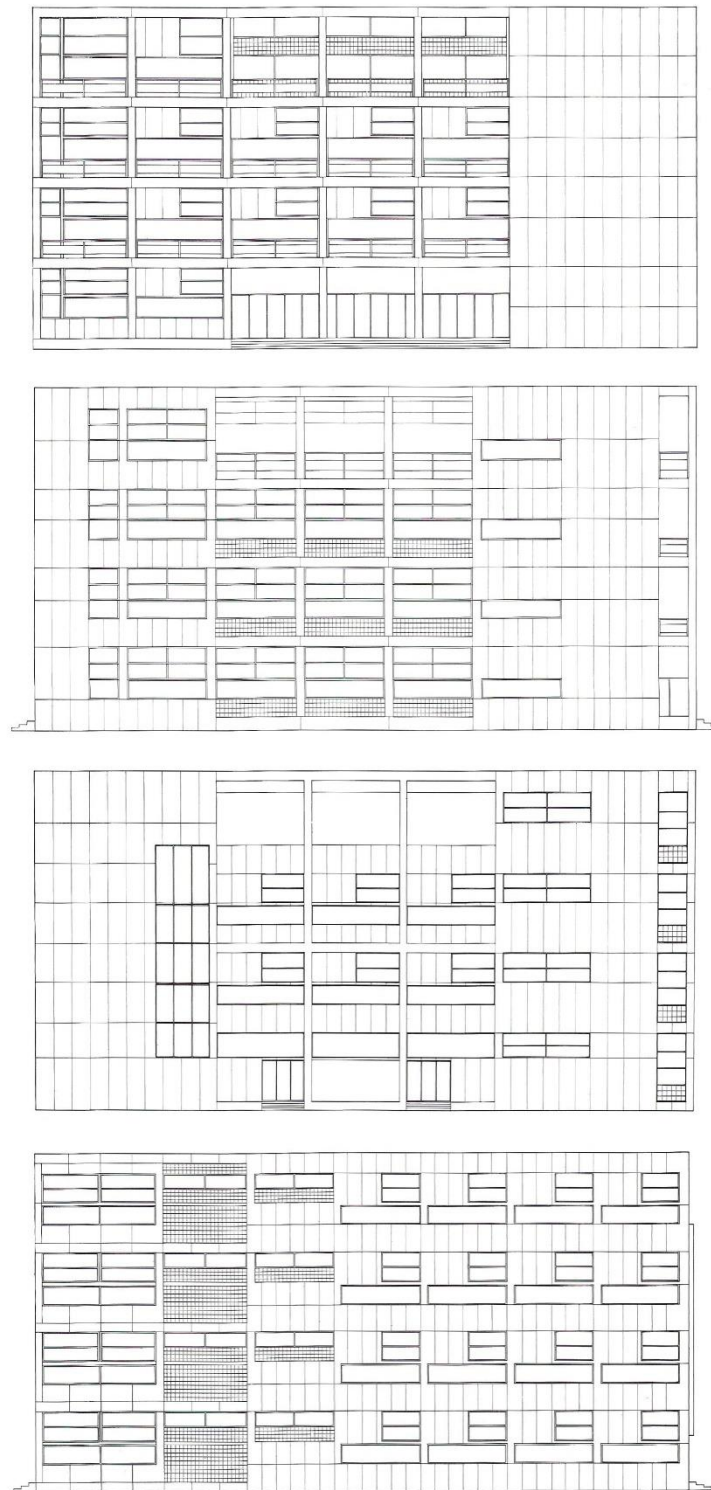


Figure 19. Casa del Fascio façade drawings: from top to down- southwest, northwest, northeast, and southeast facades respectively [Peter Eisenman, *Giuseppe Terragni: Transformations, Decompositions, Critiques*, 28]

4.6.1 Notation

Notation may be defined as “a system of marks, signs, figures, or characters that is used to represent information”.¹⁹⁷ The word also denotes the characters, symbols and abbreviations specific to art, science or mathematics. A notation specific to any field is only meaningful in that field; in other words it does not make sense in any other field. An example of such notation are musical notes which represent the duration and pitch of sound in music. Musical notes do not have any correspondence in any other field than music itself. Some signs we encounter in daily life may also have specific meanings in some fields. For example, when we see an “arrow” sign in our daily life, we know that it implies directionality towards some place, whereas it is used in logics to represent the proposition “if...then”. Similarly, a notation specific to art, science or mathematics has only one agreed upon and fixed meaning which is not open to interpretation at all.

In architecture we can think of two types of notations: formal and textual. Formal notations in architecture are representational in that they are expressive of a specific period, symbol or architectural style. An example may be Doric, Ionic or Corinthian columns. These three types of columns are different in terms of their façades, capitals, and bases and therefore easily distinguishable from each other. Besides being a structural element, these columns represent the orders to which they belong and bring with themselves specific rules and proportions. When we see the façade of Parthenon, we may immediately say that it is a building with Doric order. The tag “Doric” represents something more than the column itself such as round capitals or the absence of a base. [Figure 20] Such reading of the notation of column is diagnostic, therefore formal. Formal notations, like mathematical notations, are not open to interpretation and have fixed meaning. Yet, it is not the notation itself, but the reading which renders it formal.

¹⁹⁷ www.merriam-webster.com.

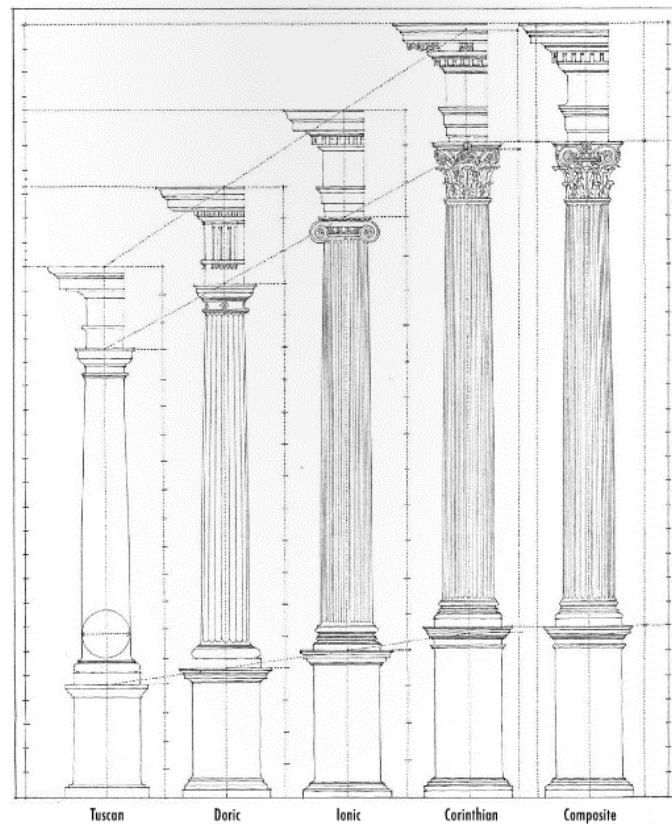


Figure 20. Classical Orders [Francis D. K. Ching, *Architecture: Form, Space, and Order*, 309]

In architecture we can also think of textual notations. Textual notations are associated with neither functional nor aesthetic categories. They are neither symbolic nor metaphoric; therefore can be considered self-referential. Like formal notations, textual notations are also visible in the façade, yet their implications are not as explicit as the formal. Textual notations do not have fixed meaning; they are open to multiple readings, as opposed to formal notations which allow for only a single reading. According to Eisenman “the building’s facades contains the traces of their evolution”, and the textual notations on the facades such as doors, windows, mullions, columns, and all other motives are the record of a building’s transformational history:

The markings on these facades are not merely the signs of the relationship between the façade and the interior volume. Rather they mediate the complex, nonlinear simultaneous interaction of volume, plane and their processes of transformation.¹⁹⁸

That is to say textual notations are traces through which the purposeful ambiguity can be comprehended or resolved.

Viewing position is a significant factor in reading of notations. Separate frontal readings of two consecutive facades and an oblique reading of the corner connecting these two facades may result in alternating readings as in Casa del Fascio:

[...] while the primary frontal reading of the northwest façade reveals an A-B-A (solid-cage-solid) articulation, and the primary frontal reading of the southwest façade is a C-A (cage-solid) articulation, in an oblique reading-from the west corner where the two facades meet- the vertical slot windows on the right of the northwest façade (which registers the setback on the southwest façade) allow the middle and right segments of the northwest façade together to read as cage, producing a wraparound A-C-C-A symmetry. This is an example of the crucial significance of viewing position to the reading of the building's notations.¹⁹⁹

Since formal notations are stable and not open to interpretation, the viewing position has no significance in formal reading. However, since textual notations are not stable and open to interpretation, the viewing position becomes a major factor in reading notations and determining any datum. According to Eisenman, in the case of Casa del Fascio, different viewing positions reveal "alternating information," not completely different or completely "additional information", and such "alternating reading points to the instability of the original conditions from which the transformations occur".²⁰⁰

[Figure 21, 22, 23, 24]

¹⁹⁸ Eisenman, *Giuseppe Terragni: Transformations, Decompositions, Critiques*, 37.

¹⁹⁹ *Ibid.*, 67.

²⁰⁰ *Ibid.*

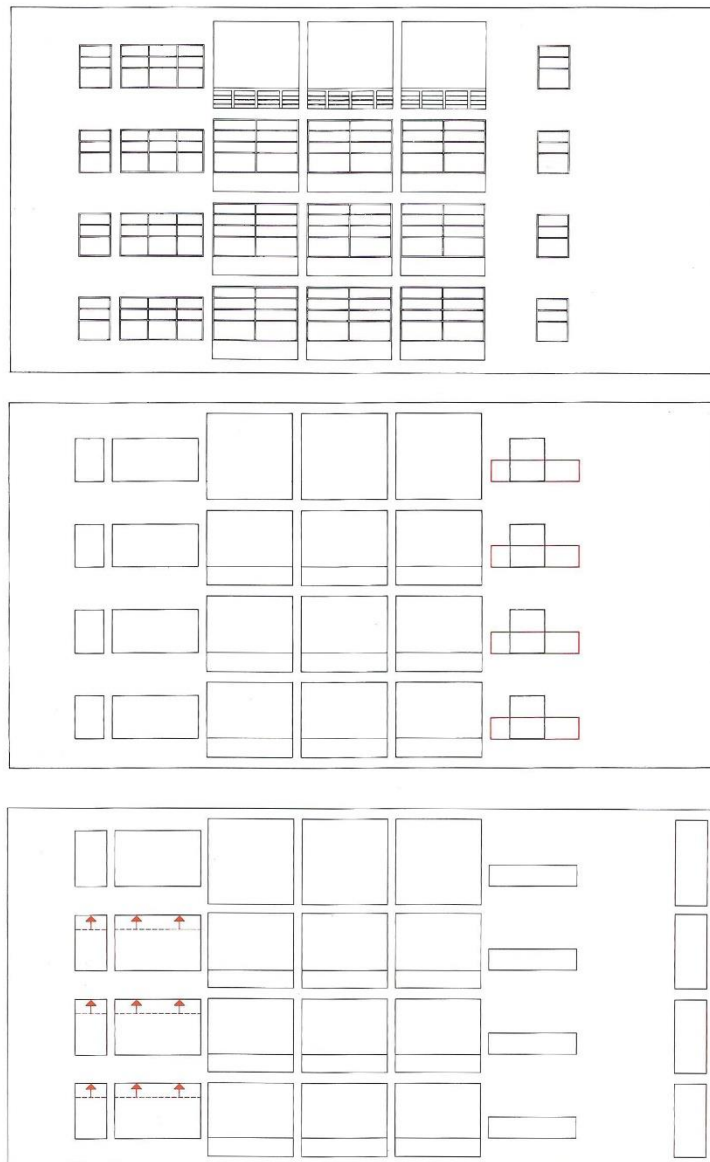


Figure 21. Casa del Fascio, Notations and the Frontal Reading of Northwest Façade: From earlier Schemes to the Final Scheme [Peter Eisenman, *Giuseppe Terragni: Transformations, Decompositions, Critiques*, 66]

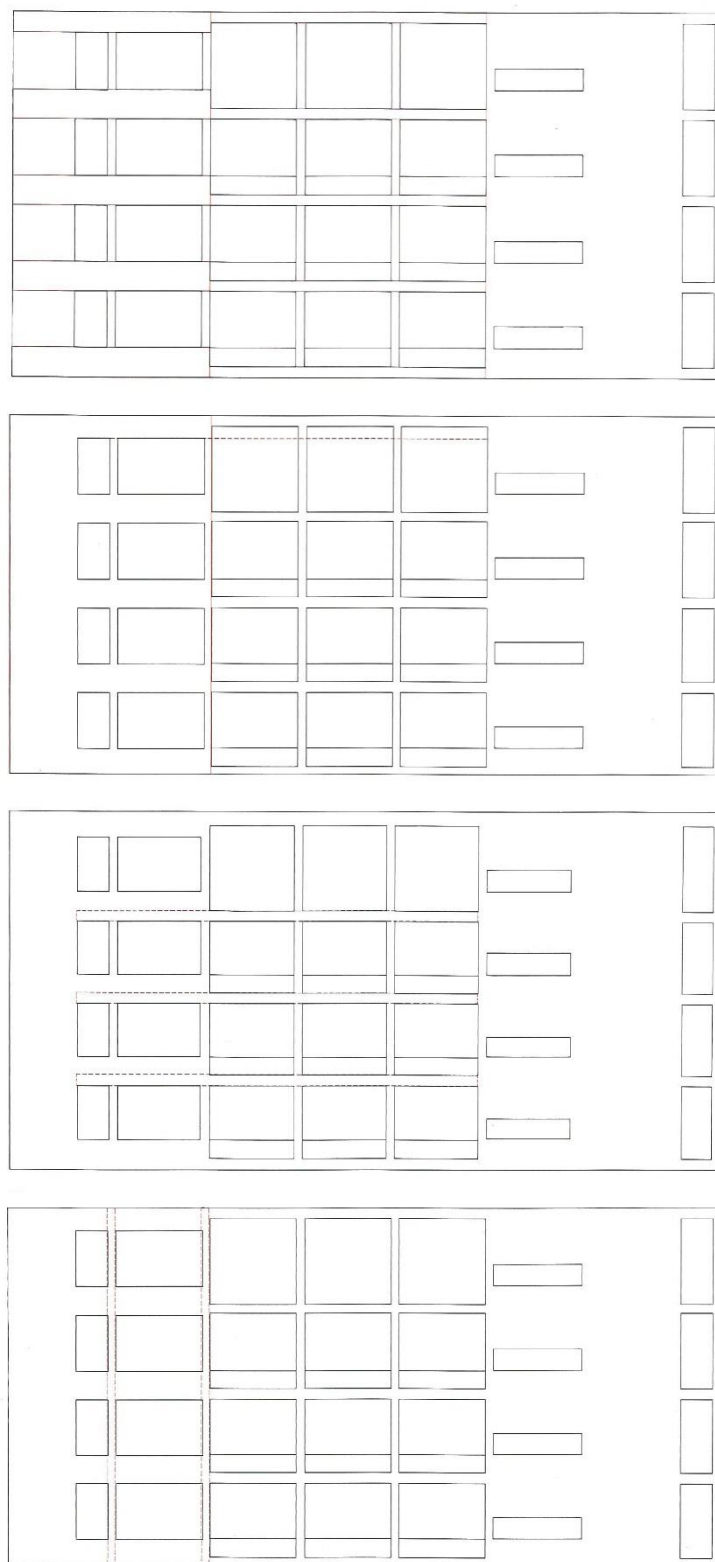


Figure 22. Casa del Fascio, Notations and the Frontal Reading of Northwest Façade: Final Scheme [Peter Eisenman, *Giuseppe Terragni: Transformations, Decompositions, Critiques*, 69]

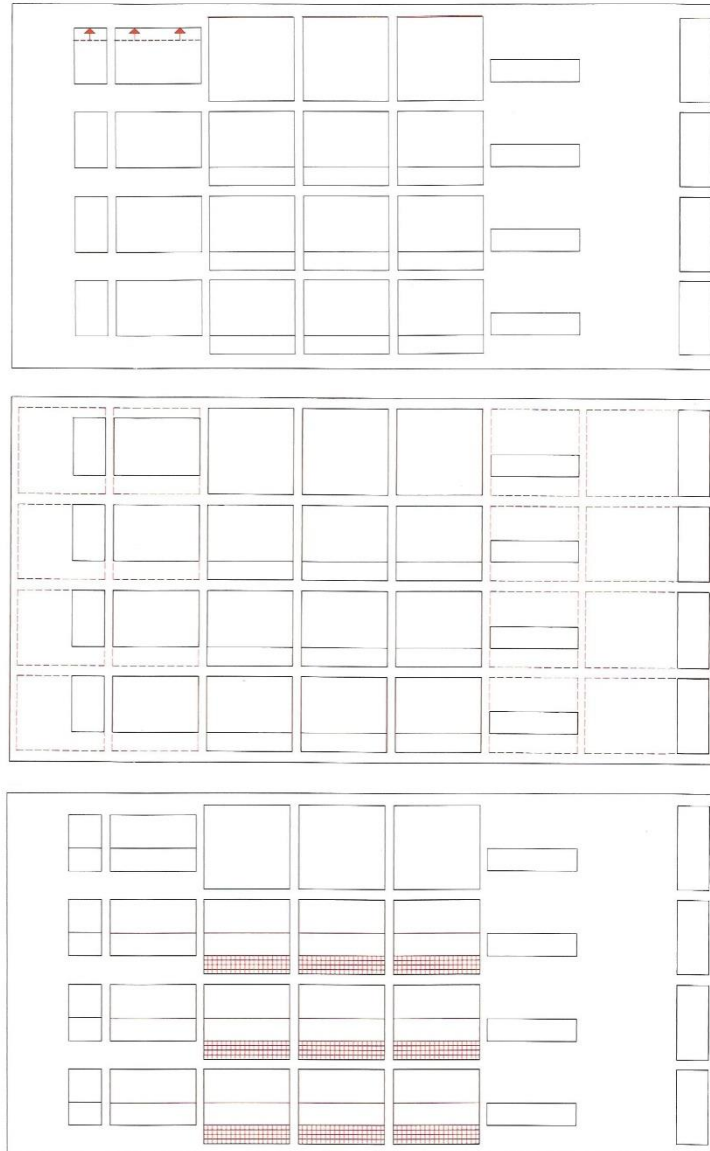


Figure 23. Casa del Fascio, Notations and the Frontal Reading of Northwest Façade: Final Scheme [Peter Eisenman, *Giuseppe Terragni: Transformations, Decompositions, Critiques*, 69]

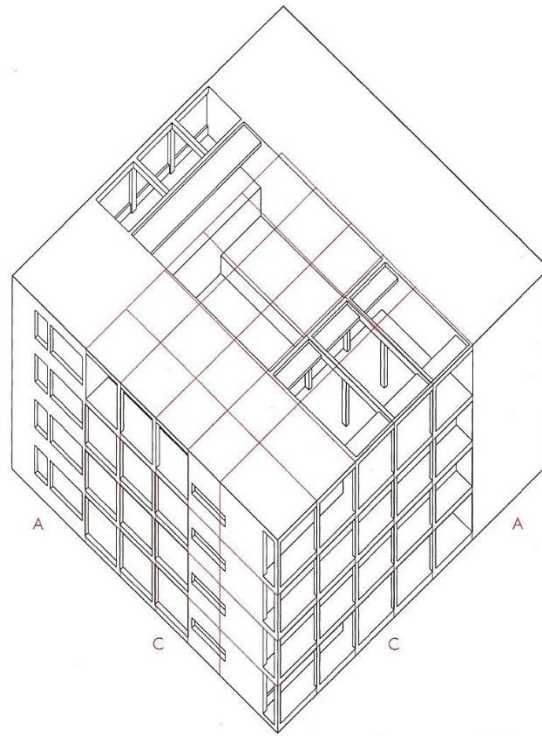


Figure 24. Casa del Fascio, Notations and the Oblique Reading of Northwest Façade: Final Scheme [Peter Eisenman, *Giuseppe Terragni: Transformations, Decompositions, Critiques*, 69]

4.6.2 Corner

Corner may be defined as “the point or area where two lines, edges, or sides of something meet”.²⁰¹ A corner may be said to have three inherent properties. Firstly, corner legitimizes the relationship of two things, which meet. It justifies that those two things are not separate but interdependent. Secondly, corner has a specific angle which displays how these two meeting lines, edges or sides are related to each other. The degree of the angle determines whether they are perpendicular or angular to each other; so the degree of relation. Thirdly, the number of corners marks the generic antecedent of a specific form. For example a cube has eight corners which are equidistant from the center. The number of corners and the angle of 90 degrees are inherent to the cube as a generic form.

²⁰¹ www.merriam-webster.com.

In order to perceive corner conditions it is essential to view the building with an angle rather than directly facing the facades from the front. That is to say a corner condition requires an oblique reading rather than frontal. While frontal reading causes the facades to be perceived as independent planes, oblique reading causes them to be perceived in relation to each other. Although buildings are generally viewed from random distances and angles, Eisenman argues that the frontal and oblique views are more privileged by the mind and the somatic memory.²⁰² Another issue in oblique reading is that, unlike a random angle, forty-five degree angle give equal significance to both planes eliminating hierarchy between the two.

If the corners are expressive of the conception of form in general, the facades may be called to be primarily oblique. [Figure 25] In Eisenman's words:

When a façade is said to be primarily frontal, it means that its particular configuration, size, shape, number, and relationship of its voids and solids, is marked in such a way as to make its schematic order most apparent when the viewer is standing directly in front of it. A façade is said to be primarily oblique when the primary conceptualization is achieved from a forty-five degree position- that is, at the corner, or meeting, of two facades.²⁰³

In the Casa del Fascio not every façade is oblique or frontal. There is a simultaneous existence of both, therefore, oblique and frontal readings result in alternating conditions:

When a building is conceptualized as simultaneously frontal and oblique, the viewer's reading, is transformed from that of a static subject-and-object relationship to one that is alternating. At times the Casa del Fascio seems to be predominantly frontal and secondarily oblique. Both readings permit elaborations of its criticality, offering different interpretations that tend both to reinforce and to undercut each other.²⁰⁴

²⁰² Eisenman, *Giuseppe Terragni: Transformations, Decompositions, Critiques*, 39.

²⁰³ *Ibid.*, 37-38.

²⁰⁴ *Ibid.*, 38.

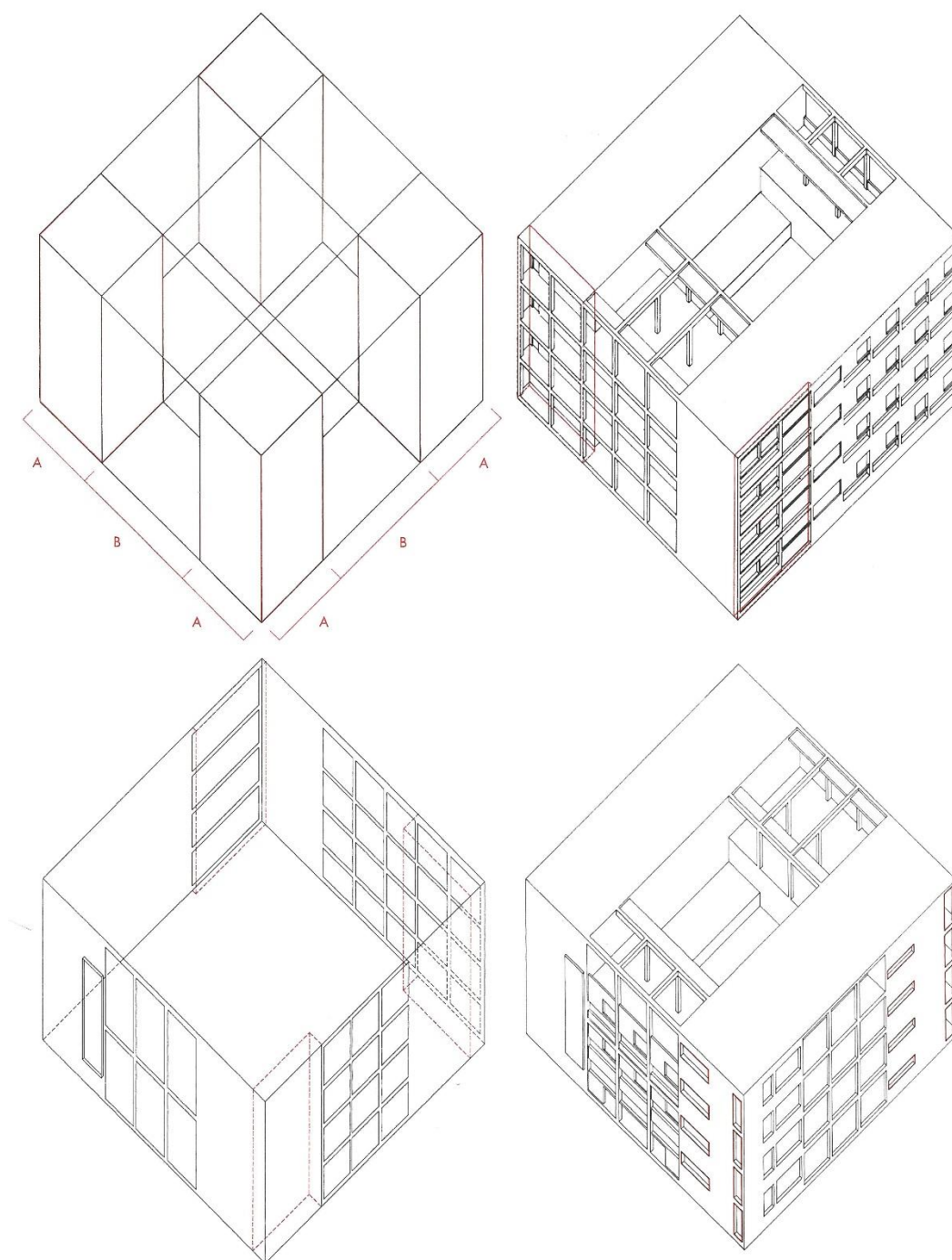


Figure 25. Casa del Fascio, Oblique Reading of the North Corner: Final Scheme [Peter Eisenman, *Giuseppe Terragni: Transformations, Decompositions, Critiques*, 36, 81]

4.6.3 Datum

A datum may be defined as “something given or admitted especially as a basis for reasoning or inference”.²⁰⁵ Everything is read with reference to its relation to a datum. While in the analytical model we can speak of a dimensional datum or a module, in the transformational model we can speak of a façade as a datum for reading. In the Casa del Fascio Eisenman identifies two different facades as datum: the southwest façade and the northwest façade. The void condition and surface reading requires the southwest façade to be read as datum, whereas the solid condition and mass reading requires the northwest façade to be read as datum. That is to say, which façade can be considered datum is dependent on the dual reading of void and solid, surface and mass. Since the Casa del Fascio displays two alternating base conditions, two of its facades are considered as datum.

One option is to admit the southwest façade –the entry façade- as the datum. It is already discussed in the previous section that the entry initiates movement, therefore defines the dominant grain of the building through which the main volumes and secondary volumes are perceived. In the Casa del Fascio, the series of volumetric planes are perpendicular to the axis defined by the entry strengthening the condition of surface. According to Eisenman, another fact which defines the southwest façade as datum is the asymmetrical position of the central void. While the central void has a symmetrical location with reference to front and rear facades, it has an asymmetrical location in terms of the side facades:

If the building were a biaxially symmetrical, purely cubic volume with a central void, then any one of the four facades could be considered datum. The asymmetric location of the courtyard in the Casa del Fascio instead begins to define southwest entry as datum, with a frontispiece that is internal to rather than added to the cubic volume.²⁰⁶

²⁰⁵ www.merriam-webster.com.

²⁰⁶ Eisenman, *Giuseppe Terragni: Transformations, Decompositions, Critiques*.

That is to say the displacement of courtyard with reference to the geometric center of the cubic form, or generic form can be considered a residue, which highlights the southwest façade as datum.

Although the southwest façade primarily justifies reading of the cube as a surface rather than mass, the reading of the façade itself alternates between solid and void. It is either conceived as “a solid plane, into which holes have been punched” or “a series of linear elements that have been joined together as a grid to produce, through their articulation, a series of voids”.²⁰⁷ While the solid condition is subtractive, the void condition is additive. Such solid and void readings of the southwest façade challenges the idea of solid as positive, void as negative. In Eisenman’s words:

[...] in the former, subtractive condition, the voids take on a positive reading by virtue of appearing to have been purposefully cut out of volume, and the solid grid elements paradoxically become negative- the residue of what is left after the process of cutting. In the latter, additive condition, the grid elements take on the positive reading, while the voids, which are merely the residual openings of the positioning of the verticals and horizontals, become negative. These conditions confound the conventional perception of solid as positive, or presence, and void as negative, or absence. In this façade, solid and void read as both positive and negative.²⁰⁸

This dual reading of the southwest façade also defines the status of this façade as datum.

The other option is to admit the northwest façade as datum. According to Eisenman the condition of datum hinges upon the facade’s potential to display the properties of mass:

Of all the facades, the northwest is the only one that seems to have been produced through the transformation of an original solid, as opposed to the transformation of an original void in the other facades. This is apparent in its dominant tripartite, solid-void-solid, or A-B-A division, in which the massing of an initial cubic solid is clearly perceptible. As

²⁰⁷ Ibid., 53.

²⁰⁸ Ibid.

in the southwest façade, the alternation between solid cutaway-a subtractive process- and reticulated stick structure-an additive process- can be read.²⁰⁹

Since the northwest façade displays the characteristics of the solid condition, Eisenman defines it as the datum, or a plane of reference from which all displacements can be read.

According to Eisenman, the condition of datum is determined according to “which volumetric base and which façade markings are isolated at given time”.²¹⁰ It is why there are alternating readings of the datum:

The datum reference thus alternates between additive conception, the entry condition as a series of planes, and a subtractive one, a volume added onto the rear of the building. In the additive conception, the series of planes extends into the central void; the asymmetric location of the central void predominates as the datum reference. In the subtractive conception, the void is read as having once been in a centralized position in a larger cubic state.²¹¹

Therefore, in the Casa del Fascio it is not possible to speak of a stable and primary datum. There exists an alternative datum which initiates different readings and legitimizes two different properties of generic form: mass and the surface.

4.6.4 Entry

It has already been argued that the entry of a building is significant in terms of understanding the properties of generic form in the sense that it generates movement. The entry responds to the external vectors originating from the site and transforms these vectors into internal ones. In this sense the entry mediates between the interior and exterior. However the external vectors originating from the site or their pressure

²⁰⁹ Ibid., 67.

²¹⁰ Ibid., 103.

²¹¹ Ibid.

on the building are not the scope of this thesis, since these forces and pressures have formal implications on specific form and require a causal link to function and intent. Therefore the relation of the Casa del Fascio's entry to Duomo is less significant to the thesis than its relation to the internal volume. That is to say, the entry can be considered an indicator of generic form whenever it acts as "textual" rather than "formal".

As previously discussed, differentiating textual entry from formal entry is a matter of differentiation between utilitarian and symbolic function. The relationship of utilitarian function to specific form is determinist, whereas the relationship of symbolic function to generic form is indeterminist. To differentiate between the two, one may refer to Francis D. K. Ching's conception of entrance in *Architecture: Form, Space and Order*. [Figure 26] Ching starts this section defining the act of entering:

Entering a building, a room within a building, or a defined field of exterior space, involves the act of penetrating a vertical plane that distinguishes one space from another and separates "here" from "there".²¹²

The existence of an entrance is essential for the existence of any movement since without an entry no movement can be initiated within a volume. In this sense, the act of separation is inherent to the solid property of a wall; therefore, the function of an entrance is utilitarian. It should be noted that the door of entry may act as a textual notation within the façade. Yet such a condition does not mean that the entry is textual. Within the scope of this thesis, the entry does not correspond to the opening of the door but to the condition of entering.

Another formal conception of entry may be exemplified with Ching's definition of entrance as either a gateway or two pillars or an overhead beam:

In the normal situation where a wall is used to define and enclose a space or a series of spaces, an entrance is accommodated by an opening in the plane of wall. The form of the opening, however, can range from a simple hole in the wall to an elaborate, articulated gateway [...] The act of entering can be signified in more subtle ways than punching a

²¹² Francis D. K. Ching, *Architecture, Space, and Order* (New Jersey: Wiley and Sons: 2015), 250.

whole within a wall. It may be a passage through an implied plane established by two pillars or an overhead beam. In situation where greater visual and spatial continuity between two spaces is desired, even a change in level can establish a threshold and mark the passage from one place to another.²¹³

When Ching's points are associated with Eisenman's arguments on additive and subtractive processes, it can be said that, an entrance as a punch on a plane denotes a subtractive process, the implied plane produced out of two pillars or an overhead beam denotes an additive process.

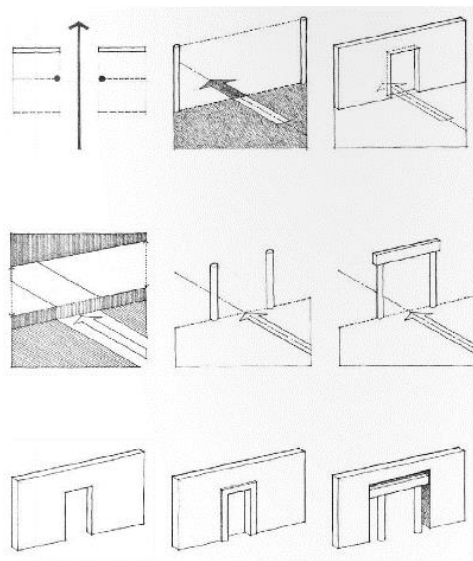


Figure 26. Entrance [Francis D. K. Ching, *Architecture: Form, Space, and Order*, 250]

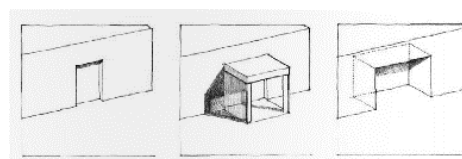


Figure 27. Entrance [Francis D. K. Ching, *Architecture: Form, Space, and Order*, 251]

²¹³ Ibid.

Ching classifies entrances under three categories: flush-on the same level with the façade plane-, projected –stretching to the front from the façade plane, and recessed–stretching towards the back of façade plane:

A flush entrance maintains the continuity of the surface of a wall and can be, if desired, deliberately obscured. A projected entrance forms a transitional space, announces its function to the approach, and provides overhead shelter. A recessed entrance also provides shelter and receives a portion of exterior space into the realm of the building.²¹⁴ [Figure 27]

If the projected or recessed forms of entrances are associated with providing shelter, that is to say protection from weather conditions, the entrance may be designated as utilitarian and formal. However, if it is associated with the quality of surface, transition or movement it may be designated as symbolic and textual. In this sense, Ching's definition of entrance is formal rather than textual.

As previously discussed, Eisenman defines the entry of the Casa del Fascio as textual since it generates movement within volume, produces the dominant grain of the building through which a series of volumes are perceived, and relates to the asymmetrical location of the inner courtyard or the interior volume. [Figure 28, 29] As exemplified with Ching's definitions, not all entries are textual and therefore not all entries are indicators of transformative processes or the internal history of a building. Whether an entry is formal or textual may be defined by examining its relationship with the façade plane, location and size of the opening as well as its relation to interior volume. It will be discussed in the following chapter that although Eisenman considers the entry of the Casa del Fascio textual, he considers the entry of the Casa Giuliani-Frigerio formal. However the quality of entry is not inherent to the generic form or the method of reading, therefore, it is not possible to generalize it as a property of transformational or decompositional processes.

²¹⁴ Ibid., 251.

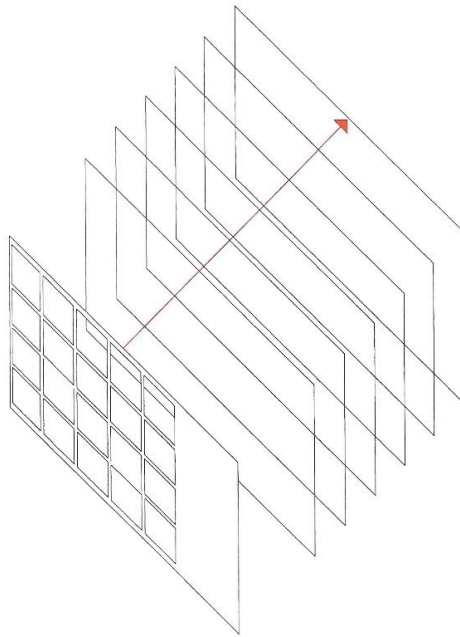


Figure 28. Casa del Fascio, Entry Vector and the Surface Plane [Peter Eisenman, *Giuseppe Terragni: Transformations, Decompositions, Critiques*, 107]

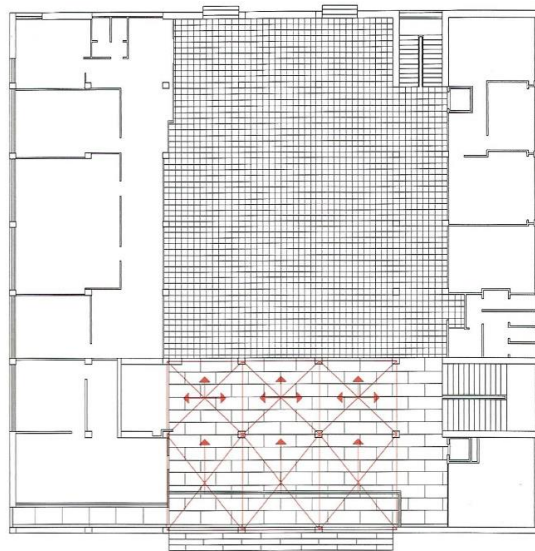


Figure 29. Casa del Fascio, Entry Vector and Generation of Movement on the Plan [Peter Eisenman, *Giuseppe Terragni: Transformations, Decompositions, Critiques*, 112]

4.6.5 Alphabetical Sequence

Use of the alphabetical sequence in transformation is different from the one in traditional formal reading. It has already been discussed in the previous chapter that a numerical sequence is a tool of the analytical-textual model whereas an alphabetical sequence is not. Since the alphabetical sequence is devoid of numerical or dimensional value it does not cohere with the mathematical and universal nature of the analytical-textual model. Thus, if alphabetical sequence is used as a tool for the analytical-model, the approach would be reductionist. In this sense, this thesis argues that the alphabetical sequence is an indicator of the transformational-textual model. Unlike the numerical sequence, which gives information about the ratio of dimensions within a single façade, what is significant to transformation is the repeating or varying alphabetical sequence in different facades in a way to relate these facades to each other. In the transformational-model, the alphabetical sequence acts as an indicator, which reveals the relationship between adjacent and opposite facades.

Eisenman argues that in the Casa del Fascio has a tripartite system of A-B-A. Through this tripartite division it is possible to read stasis and rotation in volume. While the symmetry of this A-B-A system on the northwest, northeast and southeast facades result in “a condition of stasis,” the asymmetry of recessions and its repetition in the three facades result in “a condition of rotation”.²¹⁵ The southwest façade is unique in that the A-B-A system is not readable, and there occurs the reading of C-A. What is significant here is the repetition of the same alphabetical sequence on different facades because it reveals the interdependency of facades. The numerical value of A or B, or the numerical relationship of A to B is not relevant to the process of transformation. Therefore, unlike a numerical sequence, an alphabetical sequence does not require the use of a colon between the letters. The alphabetical sequence may be written in the form of ABA or A-B-A.

²¹⁵ Eisenman, *Giuseppe Terragni: Transformations, Decompositions, Critiques*, 36-37.

CHAPTER 5

TEXTUAL-DECOMPOSITIONAL MODEL

The last form of textual reading introduced in this chapter is textual-decompositional model. Departing from the notion of composition, the study redefines decomposition with reference to Peter Eisenman's "Futility of Objects: Decomposition and the Processes of Difference". With reference to this text, this study differentiates between literal decomposition and textual-decomposition, and discusses the three categories of decomposition: pre-compositional, composite, and extra-compositional. The significance of Eisenman's article is that it defines decomposition better than he does in *Giuseppe Terragni: Transformations, Decompositions, Critique*. While in "Futility of Objects" Eisenman focuses on decomposition as the contrapositive of composition, in *Giuseppe Terragni: Transformations, Decompositions, Critique* he discusses it in comparison to transformation. Then, this thesis focuses on Eisenman's reading of the Casa Giuliani*Frigerio in order to determine the fundamental properties and indicators of the textual-decompositional model.

5.1 Decomposition: Definition

In "Futility of Objects: Decomposition and the Processes of Difference" Eisenman associates composition with the classical and transformation with the modernist mode of making, and proposes a new mode of making for the post-modern processes. According to Eisenman, both classicism and modernism are based on the idea of "original perfection," that is to say "any specific object is understood by some

reference to type forms”.²¹⁶ What differentiates the two views is that the former was based on the “natural” whereas the latter on the “abstract”:

In the classical these type forms were ideal and “natural”, characterized by symmetries, central axes, and a hierarchy of elemental parts. In the modern, type forms were platonic and abstract, characterized more easily by references to dynamic, asymmetric, mechanistic structures than the hierarchical types of the classical.²¹⁷

Therefore, it can be said that both composition and transformation presume “that type forms are linked by an internal history to an object”.²¹⁸

According to Eisenman, the processes of the classical and the modern share two common ideas: “the capacity of meaning to inhere in a form” and, “the grounding of the processes of composition and transformation in the idea of a type”.²¹⁹ Eisenman argues that the post-modernist mode of making should be based on different ideas:

First, the reintroduction of history not merely as a simplistic reaction to modernism, nor as a literal classicism but rather in the concept of the negative which is embedded in the classical tradition, potentially brings a new dimension of interpretation to the idea of history. Second, the introduction of the negative of the classical proposes the possible inversion of the nature of the object, its capacity to hold meaning, and the inversion of the processes of composition and transformation, potentially erasing the basis of the concept of type.²²⁰

Different from composition and transformation, Eisenman proposes decomposition as an alternative mode of making.

²¹⁶ Peter Eisenman, “Futility of Objects: Decomposition and the Processes of Differentiation” in, *Eisenman Inside Out: Selected Writings 1963-1988* (New Haven: Yale University Press, 2004), 171.

²¹⁷ Ibid.

²¹⁸ Ibid.

²¹⁹ Ibid., 172.

²²⁰ Ibid.

In general, decomposition in general may be defined as “separating into constituent parts or elements or into simpler compounds”.²²¹ Within the scope of this thesis decomposition is not understood in its literal meaning. Rather, it is redefined as the “contrapositive of composition” with reference to Eisenman.²²² Decomposition is the contrapositive of composition in that reference to type forms does not result in sameness or fixity. It does not assume that “complex data present in a façade or a plan can be understood by a reversal of the process to some singular or binary ideal or natural mode”.²²³ In order to understand how decompositional processes operate, it is necessary to refer to Eisenman’s classification of decompositional processes: pre-compositional, composite, and extra-compositional.

5.2 Categories of Textual-Decomposition

Eisenman dedicates his article “Futility of Objects: Decomposition and the Processes of Difference” to the idea of composition. Although Eisenman also discusses decomposition in his book *Giuseppe Terragni: Transformations, Decompositions, Critiques*, the article “Futility of Objects” better explains the fundamentals of the process. In this article Eisenman defines decomposition as the negative of classical composition and introduces the main aspects of the process by deconstructing certain buildings through what he calls “heuristic approximations”.²²⁴ According to Eisenman the three different categories of decomposition, namely pre-compositional, composite, and extra-compositional suggest varying processes of making which are basically different from the process of composition in the classical sense.

²²¹ www.merriam-webster.com

²²² Eisenman, “Futility of Objects: Decomposition and the Processes of Differentiation,” 172.

²²³ Ibid.

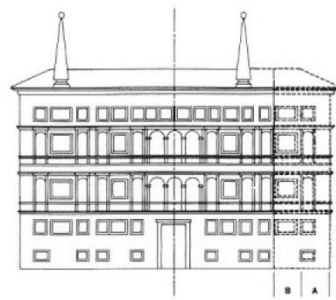
²²⁴ Ibid.

5.2.1 Pre-compositional

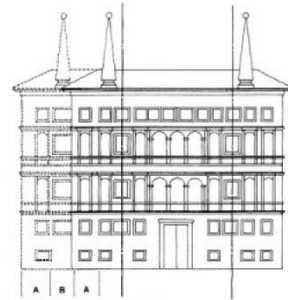
The first category Eisenman introduces is the pre-compositional. The pre-compositional process is based on the rule of symmetry and the basic assumption that an entry defines the central axis of an ideal state. The façade is considered to be produced by an addition to or a subtraction from this ideal symmetrical state. While a façade is not symmetrical as in classical composition, its asymmetries can be explained with reference to the rules of symmetry. That is to say the existing asymmetrical condition could be restored to a state of “pre-existing unity”.²²⁵

Eisenman exemplifies the pre-compositional process by applying the operations of addition and subtraction on the bilateral structure of the Palazzo Minelli. There could be two ideal states for the Palazzo Minelli: in the first one the AB fragment may be added to the right of the façade to complete the ideal state, whereas in the second one, the AB fragment may be subtracted from the left of the façade. [Figure 30] Both conditions presume that the entry defines the axis of symmetry on the front façade. Another approach is to define the pinnacles as datum. The asymmetrical position of pinnacles with reference to the entrance or the axis of symmetry also indicates that there are two different initial states. [Figure 31] While one state requires the right pinnacle to be shifted towards right, the other state requires the left pinnacle to be shifted towards right ensuring the symmetry of the pinnacles.

²²⁵ Ibid., 173.

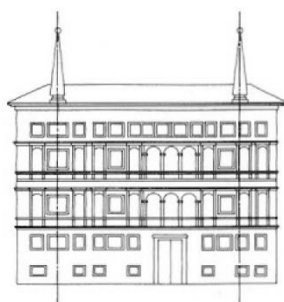


Palazzo Minelli, showing addition of missing AB fragment on right.

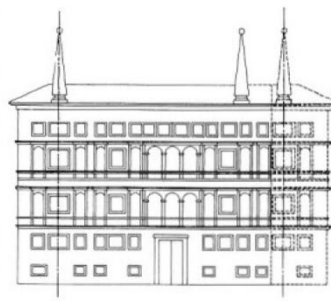


Palazzo Minelli, showing subtraction of AB fragment of ABA bay on left, producing a symmetrical condition about two axes.

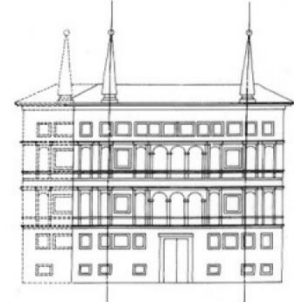
Figure 30. Palazzo Minelli, Entry as Datum [Peter Eisenman, “Futility of Objects: Decomposition and the Processes of Differentiation” in, *Eisenman Inside Out: Selected Writings 1963-1988*, New Haven: Yale University Press, 2004, 172]



Palazzo Minelli, showing two roof pinnacles as a datum defining two different axes of symmetry.



Palazzo Minelli, showing movement of right pinnacle to correspond to the position of the left, to re-create a stable condition of origin.



Palazzo Minelli, showing movement of left pinnacle to correspond to the position of the right, producing another stable condition of origin.

Figure 31. Palazzo Minelli, Pinnacles as Datum [Peter Eisenman, “Futility of Objects: Decomposition and the Processes of Differentiation” in, *Eisenman Inside Out: Selected Writings 1963-1988*, New Haven: Yale University Press, 2004, 173]

In the pre-compositional process different readings of the existing state towards the initial state implies two conditions of origin which is attained through the operations of addition and subtraction:

In each case, an understanding of order comes from the idea that there is an original unity from which elements have been added or subtracted to produce what seems to be incomplete building. Since composition in Alberti's definition is finite and does not admit such additions or subtractions, the process which produced the actual object is not strictly compositional. Palazzo Minelli, in classical terms, is precompositional because (1) what seems to be transformations are only additions and subtractions; and (2) what seems to be a type-form is only derived from a primitive vertebrate symmetry, commonly found in natural order.²²⁶

In this sense, the pre-compositional process is the simplest and least complex category of decompositional processes.

5.2.2 Composite

The second category of decompositional processes is the composite. The composite basically designates superimposition of two simple type forms. In the composite there is only the addition and the overlapping of types. Similar to the pre-compositional model, the composite also departs from the asymmetrical location of entry with reference to the front façade. Eisenman exemplifies the case of composite by examining the Palazzo Surian. Eisenman argues that, the frontal façade of the Palazzo Surian may be completed to an ideal state either by adding a fragment on the left or subtracting the fragment on the right; which is a property of the pre-compositional process. [Figure 32] Yet, the Palazzo Surian may also be conceived as superimposition of two types, which is called the composite.²²⁷

²²⁶ Ibid.

²²⁷ Ibid., 173-174.

While the twin doors on the frontal façade of the Palazzo Surian define one axis of symmetry, the single entry door on the right defines another one. Departing from the fact that there are multiple entrances and multiple axes of symmetry the building can be decomposed into two simple types which are symmetrical within themselves. [Figure 33] However, these types produce an asymmetrical compound when they are overlapped. Both composite and transformation rely on one type for existence, yet composite is different from transformation in that there is no transformation of a single type but a combination of two:

In the Palazzo Surian there is no transformation of the original types. Instead of one original base, the building is merely the superimposition of two simple types. Since composition involves some form of transformation of a type to a specific form, such superimposition is merely another aspect of the composite.²²⁸

In this sense, in the case of composite, it can be argued that there is no single origin but multiple origins from which the building emerges. Since there is no single origin, composite cannot be considered as a process of classical composition.

²²⁸ Ibid., 175.

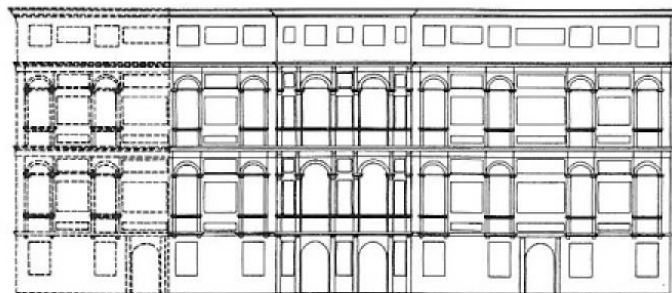
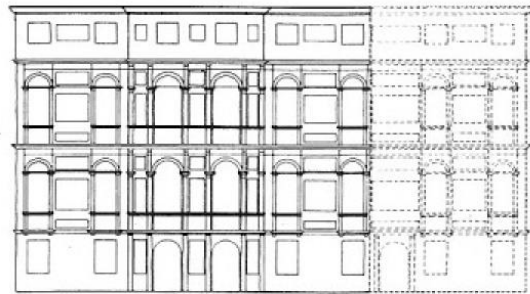
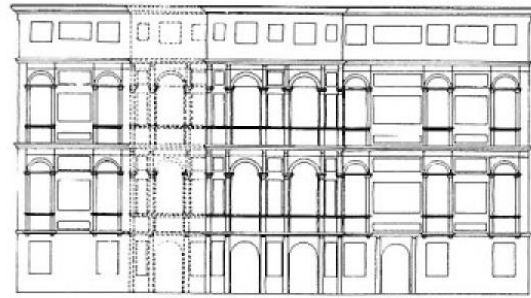


Figure 32. Palazzo Surian, Restoring Symmetry by Shifting, Subtraction and Addition Respectively [Peter Eisenman, "Futility of Objects: Decomposition and the Processes of Differentiation" in, *Eisenman Inside Out: Selected Writings 1963-1988*, New Haven: Yale University Press, 2004, 174]

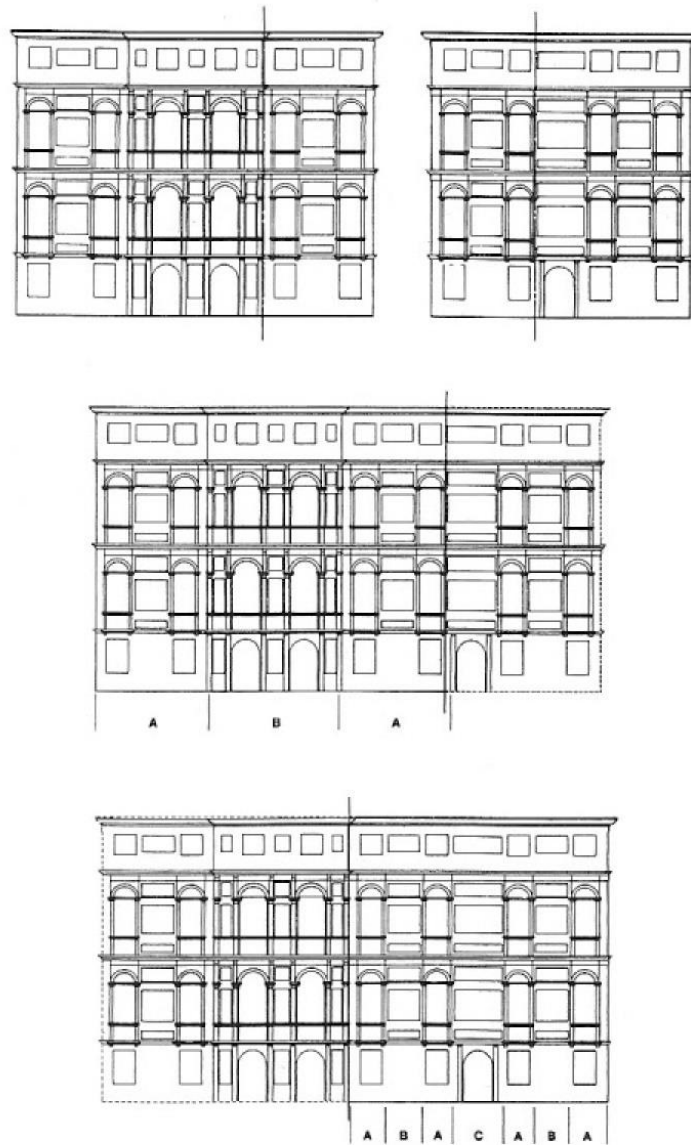


Figure 33. Palazzo Surian, Superimposition of two simple types [Peter Eisenman, “Futility of Objects: Decomposition and the Processes of Differentiation” in, *Eisenman Inside Out: Selected Writings 1963-1988*, New Haven: Yale University Press, 2004, 174]

5.2.3 Extra-compositional

The third category of decomposition is the extra-compositional which is associated with succession rather than bilateral symmetry. Eisenman exemplifies the extra-compositional by analyzing the Palazzo Foscari. According to Eisenman Palazzo Foscari may also be restored to an ideal state by applying additive or subtractive processes; which is again the property of the pre-compositional. [Figure 34] At this point, this thesis aims at clarifying the difference between the pre-compositional and the extra-compositional through a comparison between Palazzo Minelli and the Palazzo Foscari. While the pinnacles of the Palazzo Minelli are located in a symmetrical position with reference to the central axis of the façade but not entrance, the pinnacles of the Palazzo Foscari are asymmetrical with reference to the central axis of the façade but symmetrical with reference to one of the entries. Therefore, in the former, the addition and the subtraction of parts does not necessarily ensure the symmetry of the façade because the position of the pinnacles should also be shifted. In the latter, however, the operation of addition results in absolute symmetry.

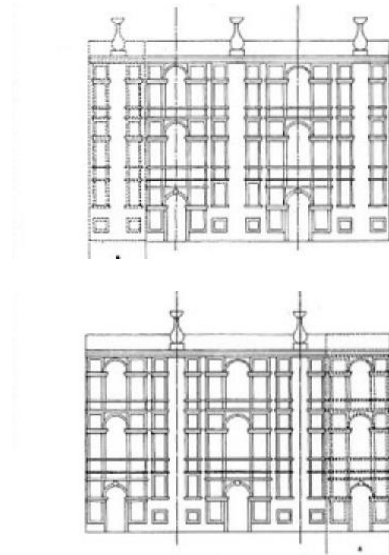


Figure 34. Palazzo Foscari, Restoring Symmetry by Addition of B bay to the left or A bay to the right respectively [Peter Eisenman, “Futility of Objects: Decomposition and the Processes of Differentiation” in, *Eisenman Inside Out: Selected Writings 1963-1988*, New Haven: Yale University Press, 2004, 175]

The application of additive and subtractive operations to the Palazzo Foscari shows that the chimneys indicate an axis of symmetry which is different from the central axis of the façade as a whole. According to Eisenman, this axis of symmetry defines a “fragment” which is repeated twice in the façade of the Palazzo Foscari. When these two fragments are covered up, another fragment that is repeating twice is revealed which is symmetrical along the entrance axes. These two different fragments repeating with a rhythm of ABAB produce a concept of unity different from ABBA. There are two ways of producing a classical concept of unity out of ABAB: One way is to add B to the beginning of the sequence or add A to the end of the sequence. [Figure 35] Another way is to either subtract A from the beginning or B from the end of sequence. The rhythm ABAB cannot be considered complete in terms of the principles of classical composition.

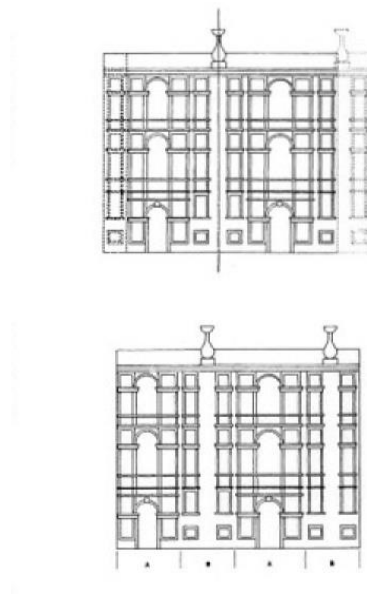


Figure 35. Palazzo Foscari, Succession rather than Symmetry [Peter Eisenman, “Futility of Objects: Decomposition and the Processes of Differentiation” in, *Eisenman Inside Out: Selected Writings 1963-1988*, New Haven: Yale University Press, 2004, 175]

Eisenman explains how the extra-compositional process differs from a compositional one:

The reading of ABAB is a reading of discrete successive units. The repetition of these units changes the façade from a compositional reading to reading as a process of succession. This idea of succession is neither pre-compositional nor composite. Rather, it suggests a third category of the not-classical, which is made more significant because the reading now has no recourse to an originating type.²²⁹

What is significant in the extra-compositional process is the introduction of the idea of fragment. This thesis considers fragment as a concept specific to decomposition and designates it as an indicator of the process. The idea of fragment as an indicator of decomposition will be further elaborated in the following section as well as others.

5.3 Indicators of Textual-Decompositional Model

This section aims at formulating certain indicators which mark the process of decomposition with reference to Eisenman's analysis of the Casa Giuliani-Frigerio in *Giuseppe Terragni: Transformations, Decompositions, Critiques*. [Figure 36, 37, 38, 39, 40] In order to do so, it is first necessary to understand how Eisenman differentiates decomposition from transformation, as well as the Casa Giuliani-Frigerio from the Casa del Fascio in terms of their processes of making. Eisenman begins the analysis of the Casa Giuliani-Frigerio with the assumption that the basic principles of transformation he derived from the Casa del Fascio could be applied to this building as well:

In short, the idea was that a building can result from a transformation of a priori primary geometric configurations, and that the results of those transformations can be marked in such a way in a building as to act textually and critically in relation to the original assumptions of these configurations. Further, the reading of the Casa Giuliani-Frigerio was intended to lend support to the proposition that the idea of alternating readings could be applied to any number of buildings. It was

²²⁹ Ibid., 176

assumed that the categories that were developed in the reading of the Casa del Fascio could constitute a general critical and textual matrix.²³⁰

However, when Eisenman applies the same analytical process to the Casa Giuliani-Frigerio, he notices that the building resists such reading because its process of making differs from that of the Casa Del Fascio.

One of the major differences between transformation and decomposition is the interpretation of the idea of origin:

Decomposition may be considered as similar to, but different from, the idea of transformation. If in the past architecture was classically conceived as beginning at a stable ground zero identified variously as type form, program, formal language, or site, then compositional and transformational strategies could be characterized as plus vectors from this ground zero. In decomposition, there is no conventional ground zero. In analysing the Casa Giuliani-Frigerio; it became apparent that type form, program, formal language, and site were not utilized as stable and determinable points of origin from which the form had been developed through, for example, strategies of modification, reinterpretation, repetition, or contextualization. Rather than being characterized as primarily compositional or transformational, the Casa Giuliani-Frigerio can thus be seen as decompositional.²³¹

Different from the idea of origin that is present in composition and transformation, in decomposition we can only speak of a “series of prior conditions”.

Since the Casa del Fascio and the Casa Giuliani-Frigerio exemplify different processes of making, Eisenman argues that they require different kinds of analytical framework:

While the Casa del Fascio can be seen to amplify architectural composition through a process of transformation no longer requiring stable origins, the Casa Giuliani-Frigerio does not proceed from such a transformation of traditional compositional means. While transformation is by definition dependent on the readability of the

²³⁰ Eisenman, *Giuseppe Terragni: Transformations, Decompositions, Critiques*, 151.

²³¹ *Ibid*, 153.

conventions that are being modified, decomposition demands the development of a new analytical framework because the building only reveals its disruption of any prior conventional conditions after the analysis has been undertaken.²³²

Therefore, Eisenman introduces decomposition as a new mode of reading specific to the Casa Giuliani-Frigerio.

However, in *Giuseppe Terragni: Transformations, Decompositions, Critiques*, Eisenman discusses decomposition mainly in relation to its difference from transformation. For example in the Casa del Fascio he describes “corner” as narrative in that it marks continuity, and non-narrative in the case of the Casa Giuliani-Frigerio because it reveals discontinuity. Keeping Eisenman’s discussions in mind, this thesis aims at developing a new terminology different from that of the Casa del Fascio and transformation. Thus, some alternative keywords are suggested to replace the ones in transformation: the term marking is suggested instead of notation, disjunction instead of corner, and data instead of datum. Entry and alphabetical sequence are redefined in relation to decompositional processes. A new term “fragment” is introduced which has no correspondence in transformational processes.

²³² Ibid., 155.



Figure 36. Casa Giuliani-Frigerio, Como, Italy. Photo by the author.



Figure 37. Balcony Tabs of Casa Giuliani-Frigerio as Markings. Photo by the author.



Figure 38. Balcony Tabs of Casa Giuliani-Frigerio as Markings. Photo by the author.



Figure 39. Casa Giuliani-Frigerio, Disjunctions at the Roof Level. Photo by the author.

5.3.1 Marking

Marking can be defined as “a mark, shape, or word that is written or drawn on something”.²³³ Besides a single mark, it also indicates “arrangement, pattern, or disposition of marks”.²³⁴ Introducing the term marking, this thesis argues that a differentiation should be made between marking and notation. While notations house information of the whole, markings only house partial information and do not lead to an a priori whole. As discussed in the previous chapter, notations are considered as traces of a building’s evolution. In this sense notation are indicators of a building’s transformational history. In decomposition we cannot speak of notations because the process is not transformational and there is no origin to which notations can lead. In decomposition, markings “are not the result of a cumulative process but rather are a trace of a discontinuous process.”²³⁵

Eisenman also argues that the markings in the Casa Del Fascio and the Casa Giuliani-Frigerio are not of the same character; yet he does not differentiate the use of the terms marking and notation:

[W]hile the markings of the first building could be read so as to reconstruct or refer back to the internal history of their own development, the Casa Giuliani Frigerio’s marking function more specifically as traces of discontinuous development having no internal origin from which to construct a narrative.²³⁶

In this sense, although Eisenman does not make such a differentiation between notation and marking, this thesis maintains the distance between the two words and uses the term marking specific to decompositional processes. [Figure 41]

²³³ www.merriam-webster.com.

²³⁴ www.merriam-webster.com.

²³⁵ Eisenman, *Giuseppe Terragni: Transformations, Decompositions, Critiques* , 155.

²³⁶ Ibid.

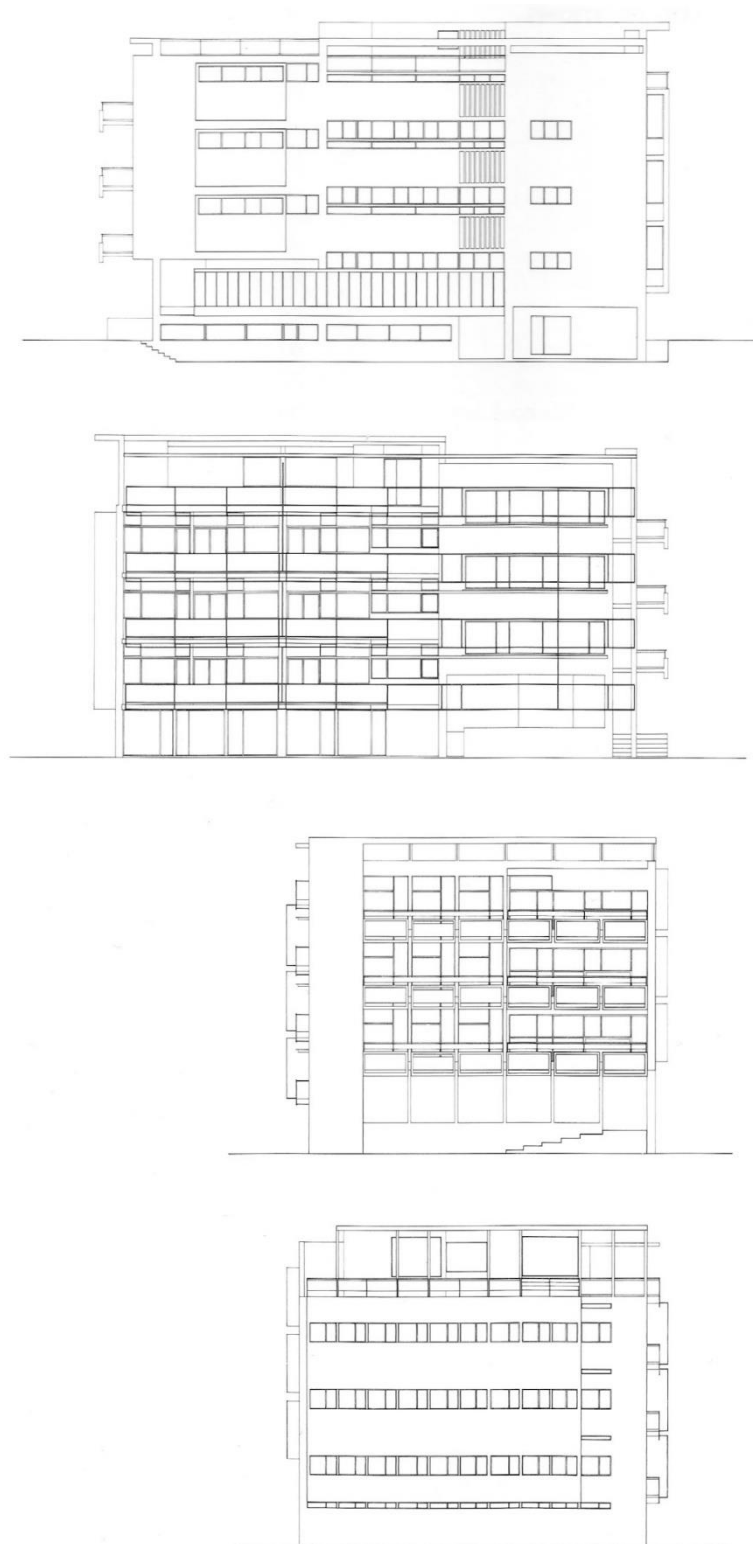


Figure 40. Casa Giuliani-Frigerio, Final Scheme of the Facades [Peter Eisenman, *Giuseppe Terragni: Transformations, Decompositions, Critiques*, 152]

Similar to notations in transformation, façade elements such as window, doors, mullions, columns, balcony tabs and all other figures may be considered as markings in decomposition. [Figure 42, 43] An example of column as a marking and indicator of decomposition can be seen in the earlier plan schemes and south façade of the Casa Giuliani-Frigerio:

The façade has seven divisions, marked by four piers. Three of the piers are parallel to the façade, and one is perpendicular. For structural reasons, conventional piers are usually placed perpendicular to a façade, but the fact that three of these piers are placed parallel to the façade causes them to be read as the residue of a single datum plane. The fourth pier, placed perpendicular to the façade, seems to turn the corner of the west façade suggesting rotation out of the datum plane.²³⁷

Eisenman's analysis of the four piers on the south façade also exemplifies how the column as a structural element is divorced from its utilitarian function and read as a marking. [Figure 44]

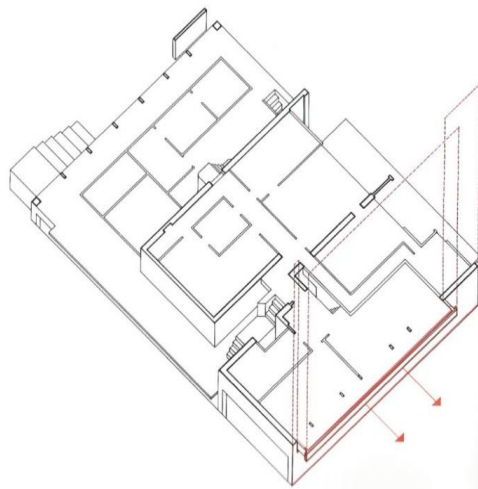


Figure 41. Casa Giuliani-Frigerio, Tab ends as markings [Peter Eisenman, *Giuseppe Terragni: Transformations, Decompositions, Critiques*, 182]

²³⁷ Ibid., 201.

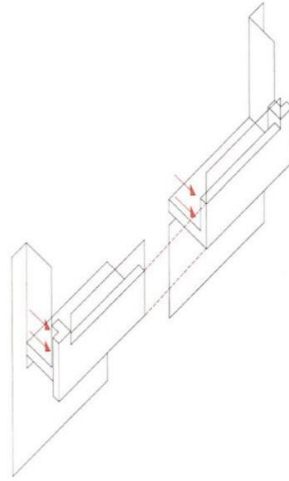


Figure 42. Casa Giuliani-Frigerio, Tab ends detail [Peter Eisenman, *Giuseppe Terragni: Transformations, Decompositions, Critiques*, 183]

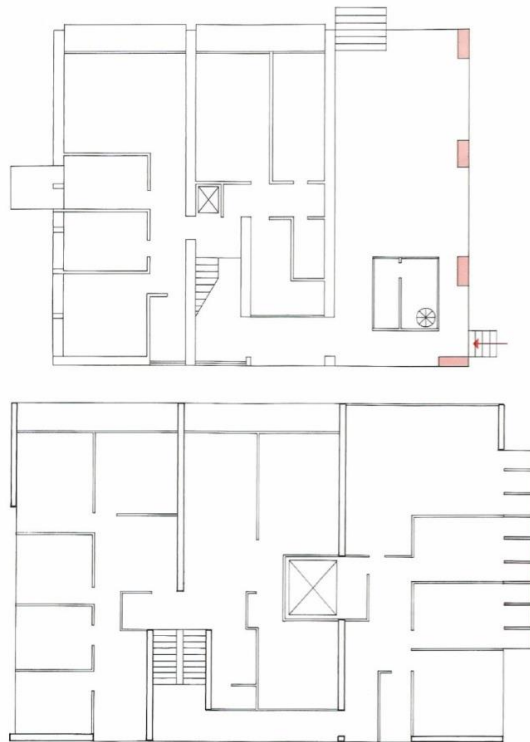


Figure 43. Casa Giuliani-Frigerio, The Column As Marking, An earlier scheme of ground floor plan on the top and typical plan at the bottom, [Peter Eisenman, *Giuseppe Terragni: Transformations, Decompositions, Critiques*, 200]

5.3.2 Disjunction

Disjunction can be defined as “a lack of connection between things that are related or should be connected”.²³⁸ If a specific form evolves from a generic antecedent as in the process of transformation, the corners mark the continuity and integrity of the whole. However, if the process of making is not transformative but decompositional, the corners are replaced by disjunctions. That is to say, since there are no lines or edges which meet at a definite point, it is not possible to speak of corner but only disjunction. In this sense, the condition of disjunction marks erasure of corner. Although Eisenman denotes these corners in the Casa Giuliani-Frigerio as non-narrative or disjunctive corner, this thesis abandons the word due to aforementioned arguments.

It was mentioned in the previous chapter that in the transformational-model, a corner is only conceivable through an oblique view because a frontal reading does not give a clue about the relationship of adjacent facades. In the decompositional-model the situation can be considered as the opposite because the disjunctions of adjacent facades indicate fracture rather than a continuity between facades:

Reading from an oblique viewpoint usually facilitates the traditional perception of continuity and wholeness mentioned above. In the Casa Giuliani-Frigerio, however the oblique views indicate fragmentation and separation, both literally and conceptually. This is signaled by an actual fracture at each corner. A consecutive reading of the facades thus confounds the traditional perception of continuity and wholeness. The oblique and frontal readings are conceptually unrelated to each other; they have little relationship other than literal adjacency and appear to be facades from different readings. It could even be said that this very disjunctiveness is the only unifying condition of the Casa Giuliani-Frigerio.²³⁹

In this sense the relation of adjacency in the Casa Giuliani-Frigerio is different from the Casa del Fascio.

²³⁸ www.merriam-webster.com.

²³⁹ Eisenman, *Giuseppe Terragni: Transformations, Decompositions, Critiques*, 165.

According to Eisenman, one of the best examples of such disjunction can be seen from the northeast. [Figure 45] At this disjunction, the horizontal roof plane and the vertical plane of the north façade have projections of different height, and the vertical plane of the east façade is also detached from them:

The vertical surface of the north façade projects forward and away from that of the east – a disjunction articulated by the vertical slot windows defining the void created by the separation of the two surfaces [...] the disjunction causes the corner to be read as three distinct planes, two vertical and one horizontal.²⁴⁰

Normally, if the Casa Giuliani-Frigerio was assumed to have evolved from a rectangular prism as mass, its corners wouldn't have displayed a condition of fracture. As opposed to a condition of mass, Eisenman argues that the Casa Giuliani-Frigerio seems to be produced out of four separate façade planes surrounding a volume.

While disjunction may be considered anomalous to a transformational process, it is a characteristic of the decompositional process:

The disjunctive corners point to an indeterminable organizational process. They indicate the resistance of the building to a both fixed, imageable form in its physical reality and to any underlying structure. It is this process, inherently different from that of transformation that has previously been termed decomposition.²⁴¹

In this sense, disjunction may be considered as a precondition of the “not-transformational.” [Figure 46]

²⁴⁰ Ibid., 166.

²⁴¹ Ibid., 169.

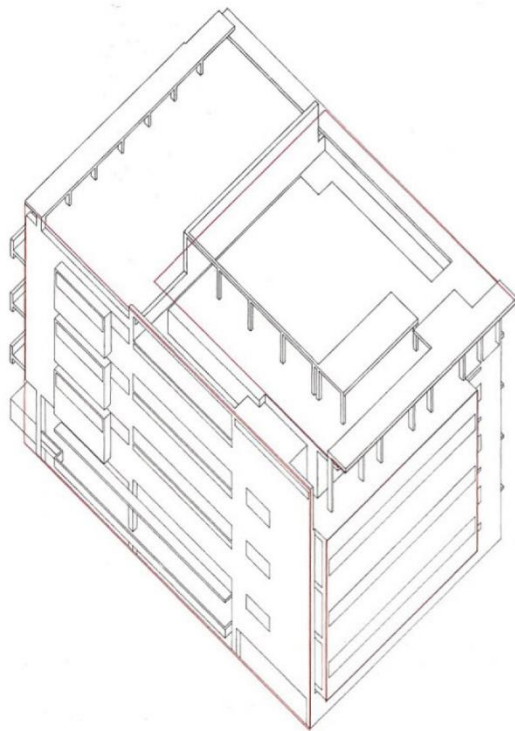
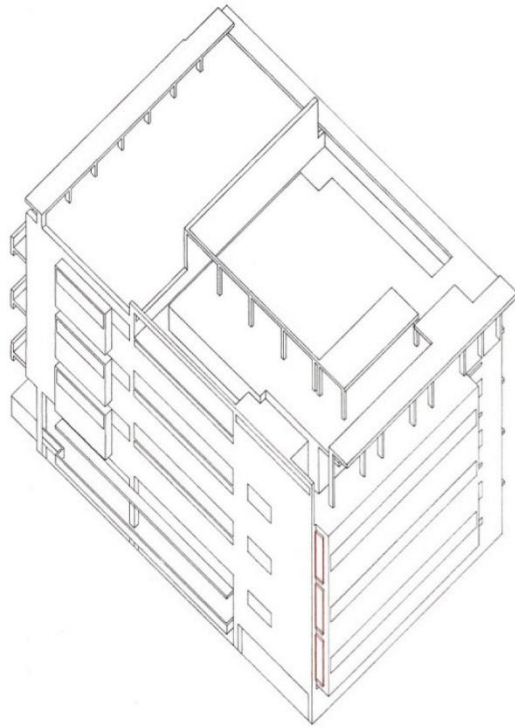


Figure 44. Casa Giuliani-Frigerio, Disjunctions and erasure of corner [Peter Eisenman, *Giuseppe Terragni: Transformations, Decompositions, Critiques*, 166]

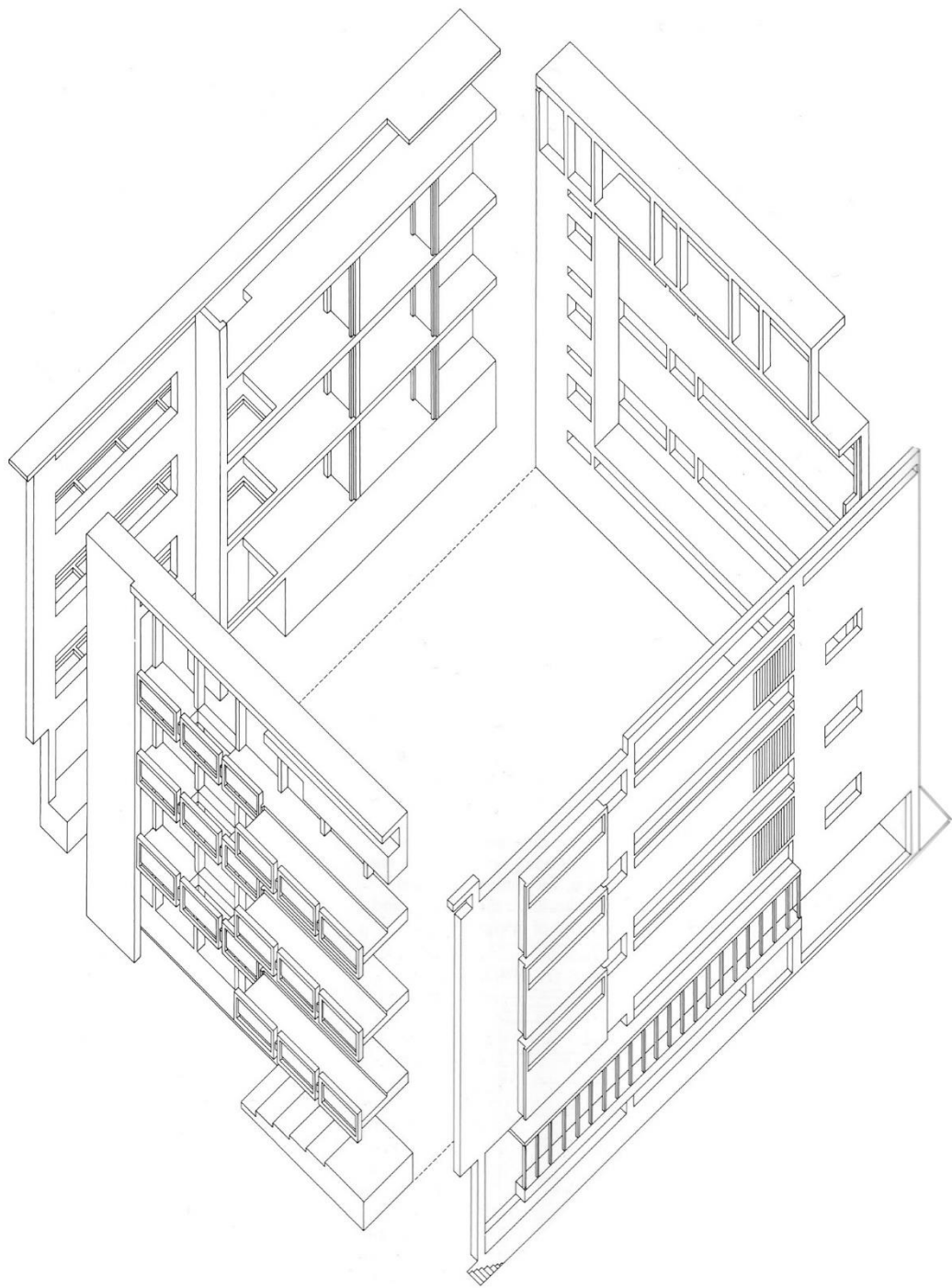


Figure 45. Casa Giuliani-Frigerio, Disjunctions and Facades as independent planes [Peter Eisenman, *Giuseppe Terragni: Transformations, Decompositions, Critiques*, 164]

5.3.3 Data

In the previous chapter datum was defined as something admitted as a basis for reasoning or inference, with reference to which all other things may be related. In decomposition while it is not possible to speak of a datum even if it is alternating, it is possible to speak of multiple datum which is called data in this thesis. The idea of multiple and shifting data can be observed from the south façade of the Casa Giuliani-Frigerio:

The disjunction is further manifested in what can be called shifting datums on the south façade. For example, while this façade can be seen as the result of both an additive and subtractive process of transformation, a significantly different reading also exists in which the solid plane and the horizontal roofline act as the fulcrum of ambiguous condition that oscillates between projective and recessive. While in the Casa del Fascio the solid part of the façade forms a continuous surface with the gridded cage, unambiguously defining the surface of the façade and thereby acting as a dominant single datum plane into which projective and recessive characteristics are compressed, in the south façade of the Casa-Giuliani Frigerio the datum oscillates between three locations.²⁴²

That is to say, while the Casa del Fascio can be characterized with the idea of alternating datum, the Casa Giuliani-Frigerio can be characterized with oscillating data.

The east façade of the Casa Giuliani-Frigerio displays three different data when the façade is read from the front. This data also designates three different conditions of generic form: void, solid, and plane:

A first datum can be seen if the center segment is considered first. It is the most open and suggests the primary condition of the building as void, constructed out of linear elements. A second datum condition is implied by the size and location of the three punched windows in the right segment, which suggests that the original condition of the building

²⁴² Ibid., 199.

is a solid. As a third datum, the left segment, with its boxlike projections and its left edge extending beyond the south column line, causes the columns visible at ground level to appear to be like pilotis supporting a “false front” above them, thus giving the façade and building a planar reading.²⁴³

That is to say, size and location of openings and enclosures, columns, balconies, hooklike projections, and tab ends as markings designate three different readings of the same façade. Different from the Casa del Fascio, in Frigerio all three readings are equivalent and none of the readings dominate over the other two.

5.3.4 Entry

It was already discussed in the previous chapter that the entry is an indicator of the transformational process because the entry generates movement and defines the dominant grain of the building. Besides transformation, the entry may also be an indicator of decomposition. In the sections on pre-compositional, composite, and extra compositional processes, it is argued that the entry has the potential of defining an axis of symmetry on the façade. In the pre-compositional process, it is mentioned that the axis of symmetry defined by the entry is used as a reference for the restoration of an ideal state through addition and subtraction. In the composite, it is shown that the entry is used for revealing two simple types which are symmetrical. Finally, in the extra-compositional process, it is argued that the entries define fragments which are symmetrical in themselves.

However, this thesis argues that what the entry indicates in transformation and decomposition are very different. In the former, the entry is conceived as a vector of movement which has direction and size. The concept of entry is related with volume, and therefore the generic form. In the latter, however, the entry is conceived as a marking which is more powerful than the other façade elements, powerful in that it has the potential to form axes according to which the whole façade may be produced and read. That is to

²⁴³ Ibid., 217.

say, the entry as an indicator of transformation is less a door than a vector, whereas the entry as an indicator of decomposition is literally the door of entrance. As a door, it is a façade element and a marking which is used for restoring symmetry or succession.

While Eisenman discusses the entry of the Casa del Fascio as one of the main aspects of transformation, he does not discuss it in the case of the Casa Giuliani-Frigerio. There may be several reasons for this. Firstly, Eisenman argues that the physical context of the Casa del Fascio is more powerful than that of the Casa Giuliani-Frigerio. According to Eisenman, the Duomo and the square raises the impression that the volumetric organization of the Casa del Fascio was generated from exterior to the interior, whereas in the Casa Giuliani-Frigerio it is the opposite. Since an entry is considered as a threshold between inside and outside, the entry of the Casa Giuliani-Frigerio does not generate movement towards the interior volume. Therefore, Eisenman argues that the entry of the Casa Giuliani-Frigerio is formal rather than textual.

However this thesis argues that the entry of the Casa Giuliani-Frigerio may also be considered textual. Of course, the aim of this thesis is not to make a thorough analysis of these two buildings, yet it is to formulate the indicators of the process of making and reading. If the process of making in the Casa Giuliani-Frigerio had been transformational, the entry wouldn't be considered textual since it has little significance to the generation of movement and internal volume. However, if the process of making in the Casa Giuliani-Frigerio is decompositional, the entry may be considered textual, since the recessed entry door does not interfere with the reading of façade organization. If the entry had been uniface with the façade plane it would either suggest an axis which does not correspond to any symmetry on the façade or indicate a different letter in the alphabetical sequence of this façade. Such a reading of the entry could also suggest a new datum. [Figure 47] In this sense this thesis considers the entry of the Casa Giuliani-Frigerio as textual, and argues that the position of entry door is a significant indicator of decomposition.

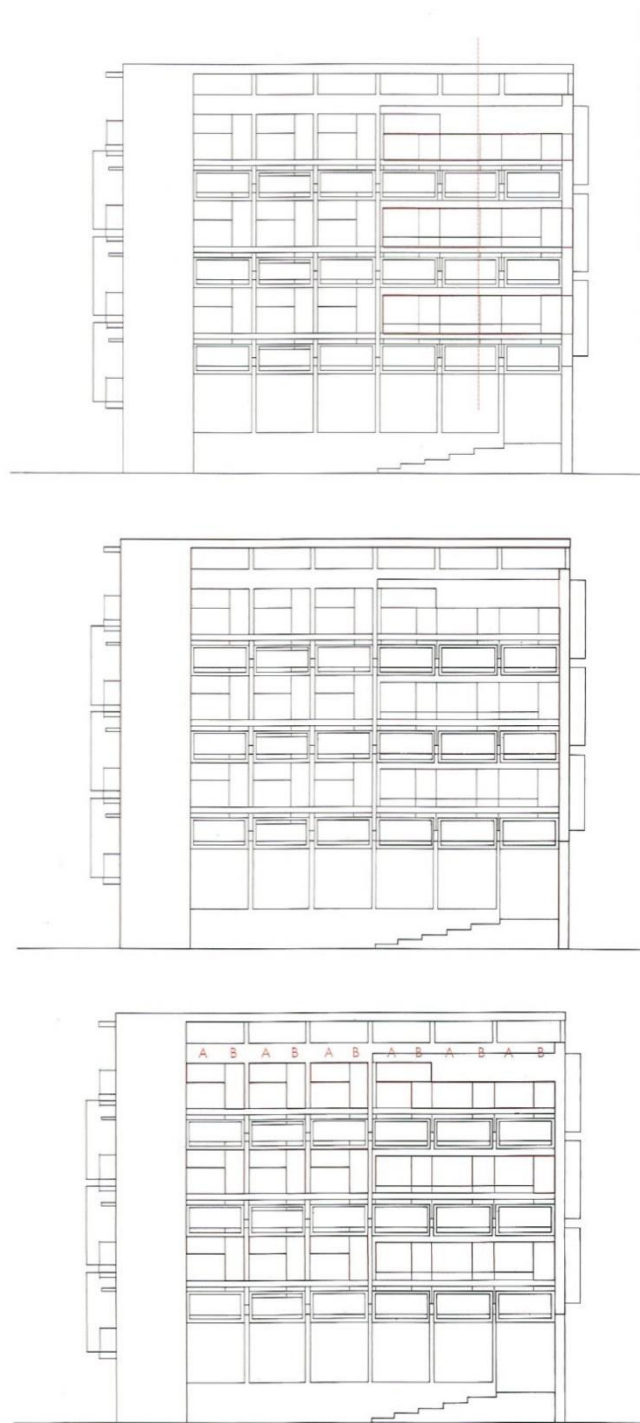


Figure 46. Casa Giuliani-Frigerio, Recessed entry [Peter Eisenman, *Giuseppe Terragni: Transformations, Decompositions, Critiques*, 206]

5.3.5 Alphabetical Sequence

It was previously discussed that unlike the numerical sequence, which is an indicator of analytical-textual model, the alphabetical sequence is devoid of numeric value. [Figure 48] Unlike the numeric sequence which is precise and absolute, alphabetical sequence is relational. Thus, the alphabetical sequence may be an indicator of both transformation and decomposition. In textual-transformational model the alphabetical sequence indicates how adjacent or opposite facades relate to each other. For example, the repetition of the same sequence in opposite facades and opposite corners implies rotation and continuity. In the textual-decompositional model the alphabetical sequence either defines the buildings relation to an ideal symmetrical state such as ABA or ABABA, or its succession such as ABAB. It can be said that while the alphabetical sequence is used to establish relations between different facades, in decomposition it is used to relate a façade to an ideal state.

The reading of the north façade of the Casa Giuliani-Frigerio displays similar outputs with the Palazzo Minelli in that the façade may be restored to a symmetrical condition either with an addition of or the subtraction of B bay. Eisenman states that:

[T]he length of the horizontal windows at the base suggests another axis of symmetry as a prior condition. Again in order to propose a stable condition, one of several displacements is necessary. One possibility would be to conceptually retract the building by one B bay on the right, which would allow these horizontal windows to have a symmetrical axis. Another possibility would be to add a single B bay to the left, thus extending the bent frame by one B bay to the left. Such a complex set of readings amplifies the asymmetric conditions presented on the façade. However, there is another condition that is not resolved by recourse to a reading of symmetry and asymmetry or plane and volume. This is a slippage, as indicated by the eccentric or incomplete bay system. Reading from left to right across the top, there is a B-A-B-A-B-A-B-B reading, with the A bay being slightly narrower than two bays. It is the extra B bay on the right that is the important signal for another reading.²⁴⁴

²⁴⁴ Ibid., 185.

Besides the pre-compositional reading similar to the Palazzo Minelli, the north façade may also be considered extra-compositional like the Palazzo Foscari: if the B bay on the right was to be replaced with an A bay, the reading would be B-A-B-A-B-A-B-A which denotes a succession rather than symmetry.

5.3.6 Fragment

In general use, a fragment may be defined as “a broken part or piece of something” and indicates “an incomplete part”.²⁴⁵ The term fragment is specific to the textual-decompositional model and does not have any correspondence in the transformational model. In the textual-transformational model there is an idea of the whole which is the primary solid from which the specific form emerges, whereas in textual-decompositional model there is no idea of a single whole. In decomposition, the building can only be understood as fragments rather than an ideal whole in the classical sense. The idea of fragment best fits the category of the extra-compositional as discussed previously. According to Eisenman, decomposition is the contrapositive of classical composition in that it is more complex and only partially reconstructable in the form of fragments:

A highly complex compositional process is indicated that can only partially be reconstructed from earlier schemes and can only be described as something other than a series of conventional narrative transformations. Thus, the north façade must be read in terms of the mutable relationship between fragments. These are not literal fragments implying some sort of whole but conceptual fragments that do not imply a prior condition of unity.²⁴⁶

In this sense, Eisenman argues that decomposition challenges the idea of unity and the part-whole relationship in classical composition.

²⁴⁵ www.merriam-webster.com.

²⁴⁶ Ibid., 187.

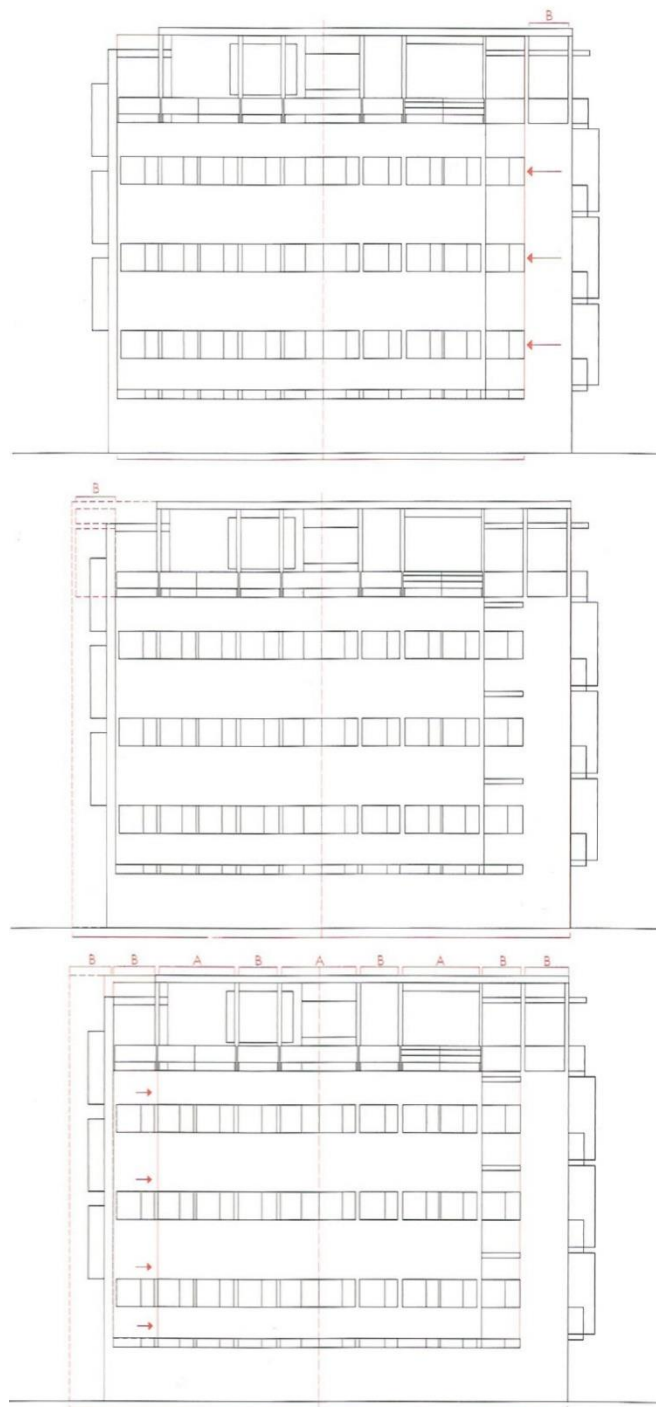


Figure 47. Casa Giuliani-Frigerio, Alphabetical sequence as an indicator [Peter Eisenman, *Giuseppe Terragni: Transformations, Decompositions, Critiques*, 184]

CHAPTER 6

TEXTUAL READING OF PRECEDENT AS A GENERATIVE ACT

Defining textual reading as a generative act, this chapter discusses the relevance of the architectural precedent to textual reading by focusing on the applicability of the methodological aspects developed in the previous chapters. Therefore, the first section of this chapter makes an overview of the three models developed in chapter 3, 4, and 5, and compares them in terms of their epistemological and methodological aspects. The second section discusses the notion of textual reading as a generative act in that it contributes to the production of new knowledge as well as new form. The third section explores the potential of precedent in architectural education by introducing the educational models or strategies of certain schools with regard to their approach towards the precedent: University of Texas, Cooper Union, and Yale University. In doing so, certain exercises and courses focusing on architectural precedents are conveyed. Finally, the last section makes a narrative and an evaluation of a graduate course conducted in Middle East Technical University.

6.1 Three Models of Textual Reading: Comparison and Overview

The previous three chapters have introduced three different models of reading that could be applied to architectural precedent: the textual-analytical model, the textual-transformational model, and the textual-decompositional model. Having already discussed the fundamentals of these models and determined their indicators, this section aims at revealing both the common and differing properties of these three. To

do so, this thesis compares these models according to the main concepts of epistemological and methodological aspects introduced in chapter two.

These three models can be compared according to their epistemological assumptions. One of the basic assumptions of the textual-analytical model is the differentiation between customary and natural beauty. Natural beauty is produced by geometrical and mathematical perfection whereas customary beauty is produced by factors which we can perceive with our senses. Therefore, natural beauty depends on objective criteria, whereas customary beauty depends on subjective ones. Departing from this distinction between two dimensions of beauty, another assumption of the textual-analytical model is that the natural material of architectural precedent can be understood by applying tools of mathematics, geometry, and musical concord.

Since the textual-analytical model is grounded in the field of mathematics, geometry, and music, the knowledge derived from the precedent has a truth claim. In this sense, the knowledge of precedent derived and generated by the textual-analytical reading is “absolute”, “universal” and “objective”. However, since different dimensional datum can be determined from different directions or viewpoints, the textual-analytical reading may result in multiple readings that are stable. These multiple readings do not contradict with each other; on the contrary, they complement each other and produce a more comprehensive reading. The textual-analytical model assumes that there is no single truth to be discovered, but multiple truths to be generated through the process of reading. The idea of multiple readings can be explained by the different readings of Rowe and Hildner, who approach the Villa Stein from different directions: the former from east-west axis and the latter from north-south axis, as already discussed in chapter three.

The textual-analytical model differs from a formal-analytical method: While the formal analytical method applied in conventional precedent analysis aims at discovering a single origin, the textual-analytical model has no such aim. The textual-analytical model affirms that it is not possible to reveal a single and stable origin. It is

only possible to reveal multiple origins which coexist simultaneously. The impossibility of finding a single origin beneath the precedent indicates the anti-foundationalist aspect of textual reading.

On the other hand, the textual-transformational model, depends on the assumption that all specific forms are representations of a platonic ideal form and each specific form can be traced back to its generic antecedent. Unlike formal transformation, in textual transformation, the process of tracing back never occurs in the form of a complete reversal of the process. That is to say, the assumption of the textual-transformational model is that the process of transformation from generic to specific cannot be repeated or reversed, but only traced back by following the notations on the façade as well as exploring the conditions of adjacency.

Although the properties of the generic form from which the specific form roots can be explained in terms of geometric relations, its properties of volume, movement, mass, and surface cannot be fully understood by applying rigorous methods. Similar to the textual-analytical model, there is no single reading in the textual-transformational model. However, different from the textual-analytical model in which there is the possibility of revealing multiple and stable readings, in the textual-transformational model, there are alternating yet stable readings which can be comprehended with reference to different base conditions. Therefore, it can be argued that, the textual-transformational reading of precedent does not lead to a single origin.

The epistemological assumptions of the textual-decompositional model can be explained with reference to the idea of classical composition, which is based on the ideas of symmetry and unity. Since textual-decomposition is considered as the contrapositive of classical composition, its main assumption is that the facades of a building can be restored to an ideal state, which is symmetrical. Though the actual buildings may seem incomplete or fragmented, the textual-decompositional model aims at bringing unity to the facades. As exemplified by the Palazzo Minelli, Palazzo

Surian, and the Palazzo Foscari in chapter five, there is no one way for restoring such unity.

Therefore, it can be argued that similar to the textual-analytical and the textual transformational models, the textual-decompositional model also denies a single reading. What differentiates the textual-decompositional model from the others is that the readings are neither singular nor stable. While Eisenman calls the multiple readings in textual-transformation as alternating, he calls the ones in textual-decomposition as oscillating:

Its [Casa Giuliani Frigerio] unstable, asymmetric conditions testify to this: an element is registered in relation to a particular configuration in one view, only to be registered to a second and perhaps completely different configuration in another. When an observer attempts to coordinate the second reading with the first, the first falls away, and vice versa. This sets up a condition of oscillating readings that were different in the Casa del Fascio. The difference between these two types of readings is crucial. In the Casa del Fascio, there are *stable readings that alternate from one to the other*. In the Casa Giuliani Frigerio, *the constant oscillation between readings never allows for stable readings to fully cohere*.²⁴⁷

The oscillating readings in the Casa Giuliani-Frigerio affirm that there is no possibility of revealing a single origin in textual-decomposition. In both the textual-transformational and the textual-decompositional model, the knowledge derived from the precedent is “relative”, “particular”, and “subjective” as opposed to textual-analytical model which is absolute, universal and objective.

These three models can also be compared with reference to their methodological aspects because they operate through different indicators. According to this thesis, these indicators affirm or reject applicability of each model. While the textual-analytical model operates through the colon, summary sequence, dimensional datum, grid, and field, the textual transformational model operates through notation, corner, datum, entry, and alphabetical sequence, and the textual-decompositional model

²⁴⁷ Eisenman, *Feints*, 74. Emphasis added.

through marking, disjunction, data, entry, alphabetical sequence, and fragment as discussed in the previous chapters. In order to compare these models, it is necessary to discuss these indicators according to their correspondences in different models.

One of the terms, which is significant for all three models is the “sequence”. In conventional methods of precedent analysis, each building can be read with reference to a mathematical structure called a numerical sequence. Yet, the numerical sequence is fixed and absolute; therefore, it results in a single reading. Instead of numerical sequence, which is a tool of the formal-analytical method, the textual-analytical model utilizes the concept of “summary sequence” which is a form of numerical sequence yet does not correspond to the same number “1”. The summary sequence is attained by a multiplication or division of an original numerical sequence as exemplified in Hildner’s reading of the Villa Stein in which the summary sequence is produced by doubling the numerical sequence proposed by Rowe.

Different from the textual-analytical model, textual-transformational and textual-decompositional models operate through alphabetical sequences. Unlike the summary sequence, which is precise, the alphabetical sequence is flexible in that it only defines the relation without introducing a numerical value. Likewise, the summary sequence requires use of colon between values since it indicates relation [1: 2: 1: 2], whereas the alphabetical sequence does not (ABAB). However, the use of alphabetical sequence in transformation and decomposition also differs from each other. While alphabetical sequence indicates the relationship between adjacent or opposite facades in textual-transformational model, in the textual-decompositional model it indicates the relationship between the markings and fragments within the same façade. The alphabetical sequence in the textual-decompositional model has no concern of relating the individual facades with each other because one of the main characteristics of decomposition is the independency of facades.

The issue of interdependency or independency of facades is associated with two other indicators of these textual processes: corner in textual-transformation and disjunction

in textual-decomposition. While the term corner indicates interdependency and the continuity of facades, disjunction indicates independency and discontinuity. Therefore, this thesis introduces corner as a precondition of transformation and disjunction as a precondition of decomposition. Corner in textual-transformation implies the existence of an a priori whole, whereas disjunction in textual-decomposition denies the existence of such an a priori whole. It is not possible to reach an ideal whole but only fragments via textual-decomposition. Although textual-decomposition assumes that the building can be restored to “an” ideal state, it is not “the” ideal state; that is to say that there is the possibility of reaching more than one ideal state by either addition or subtraction in the pre-compositional model, overlapping and superimposition in the composite, and succession in the extra-compositional model.

Another significant term that is common to all three models is the datum, which is already defined as the basis of understanding any building. Although the term is common to all three models, its elaboration in each model is different. Since textual-analytical model is grounded in mathematics, the datum attained through such reading is dimensional. The dimensional datum in textual-analytical reading determines which interval will be called “1” in the summary sequence. Thus, the dimensional datum constitutes the base for reading all the other dimensions and relation of these dimensions to “1”. Though the dimensional datum has numeric value, different dimensional datum can be determined when viewed from different directions as exemplified in Rowe and Hildner’s reading of the Villa Stein.

When the textual-transformational model is applied to a precedent, a façade may appear as a datum for reading the others, as well as the whole of any platonic ideal form. However, such reading of any façade as datum changes according to the viewpoint, that is to say whether the object is read from the frontal or oblique view. In this sense, textual-transformational model proposes an alternating datum. When the textual-decompositional model is applied to a precedent, more than one façade or marking appears as datum. These multiple conditions, however, contradict with each

other rather than complementing a single reading. Therefore such condition of datum in textual-decompositional model is called data in this thesis. The concept of datum in the textual-transformational model and data in textual-decompositional model is different: the former generating alternating readings and the latter generating oscillating readings as exemplified by Eisenman's reading of the Casa del Fascio and the Casa Giuliani-Frigerio respectively.

Another significant indicator is entry. The entry acting as a vector of movement indicates applicability of the textual-transformational model, whereas the entry acting as a reference for the axis of symmetry or asymmetry indicates the applicability of the textual-decompositional model. However, in this thesis, entry is not considered as an indicator of textual-analytical model but only of the textual-transformational and the textual-decompositional. The reason is that while any building requires an entry, not all entries are textual. In analytical reading, the entry of a building may be explored in terms its dimensions, yet such a reading will be formal rather than textual because it will indicate a precise numerical value which is not open to interpretation.

Two other indicators significant for textual reading are notation and marking, which denote the façade elements in textual-transformational model and textual-decompositional model respectively. The notation and marking is similar in that they both carry information related with a building's internal history. The difference between these concepts is that notation accommodates information of both parts and the whole, while marking does not accommodate information of the whole. Though every building has certain façade elements or openings such as columns, doors and windows, these elements are merely formal when they are read as if they were caused by utilitarian function. In this sense, these façade elements can be considered as indicators of textual-transformational and textual-decompositional model whenever they are divorced from their utilitarian function.

This thesis argues that, such façade elements cannot be considered as indicators of the textual-analytical model. The reason for this postulation is similar to the one put

forward for the concept of entry. When the façade elements are read with mathematical and geometric tools, the reading becomes formal because such elements denote precise dimensions leading to a single truth. This approach contradicts with the fundamental assumptions of textual reading as defined in this thesis, because it treats the precedent as a mine from which already existing information can be derived. Conversely, this thesis argues that the knowledge of precedent is made rather than found, thus rejecting the use of façade elements as indicators of the textual-analytical model.

Though these three models operate through different indicators, this thesis argues that they have certain common methodological aspects as already discussed in chapter two. Since the concept of the architectural precedent is reconceptualized in this thesis, it is argued that the new approach to reading precedents require the denial of causality, contextuality, historicity, intentionality, and diagnosticity in order to generate new knowledge. While these concepts constitute the base of conventional methods of precedent analysis, the textual reading as a form of understanding precedent denies these features due to its epistemological assumptions. [Figure 49, 50]

6.2 Textual Reading as a Generative Act

Considering its epistemological and methodological aspects, this thesis argues that textual reading of precedents is also a generative act. In other words, the three models proposed in the thesis are forms of writing in addition to reading. Accordingly, there are two dimensions of such act of generation: generation of new knowledge and generation of new form. Generation of new knowledge indicates that textual reading is not about deciphering codes or deriving already existing information that lies in the precedent, whereas the generation of new form indicates that the textual reading of precedent is a catalyst for invention of form rather than a barrier against it. The following paragraphs discuss how the textual-analytical, the textual-transformational and the textual-decompositional model contribute to generation of new knowledge and new form.

FORMAL MODEL	
COMPOSITION	CHARACTER
Definition: Organizational structural of form *	Definition: Symbolic content of form*
	General Character is associative and referential, as when, through the manipulation of mass and form, extra architectural or literary values such as "power", "dignity", "charm" or "grandeur" are thought to be invoked**
	Type Character is expressive and connotative and is meant to impart a clear understanding to the spectator of what the particular building is meant to be**
	Specific Character reflects factor peculiar to the particular building which may arise directly from specific functional and structural requirements, or from the genius of the architects**
* Colin Rowe, Character and Composition; or Some Vicissitudes of Architectural Vocabulary in the Nineteenth Century in The Mathematics of the Ideal Villa and Other Essays (Cambridge: The MIT Press, 1995), 60-87	
** Donald Drew Egbert, The Beaux-Arts Tradition in French Architecture (Princeton: Princeton University Press, 1980), 122 cited in Alexander Caragionne, The Texas Rangers: Notes from the Architectural Underground (Cambridge: The MIT Press, 1995), 137.	

Figure 48. Formal Models, prepared by the author.

TEXTUAL MODELS			
Elimination of general character, type character, and specific character of a built form			
ANALYTICAL MODEL	TRANSFORMATIONAL MODEL	DECOMPOSITIONAL MODEL	
Definition: The action of studying the relationship of parts via universal tools	Definition: The action of changing in form, shape, appearance, character or condition	Definition: Contrapositive of classical composition	
Starting with the finished form it is possible to understand how the parts are related to each other and to the whole	Starting with the finished form it is possible to go backwards and acquire a pool of possible steps which come after the other	Starting with the finished form it is not possible to go backwards and reveal any steps, it is only possible to acquire certain fragments	
Analytical process is not sequential Results in multiplicity of readings	Transformation process is sequential and continuous Results in alternating readings	Decomposition process is discontinuous and fragmented Results in oscillating readings	
There is more than one readings that are stable	There are stable readings that alternate from one to the other	There are no stable readings because the constant oscillation of readings never allows stable readings to fully cohere	
There is a clear geometric link between the specific form and its generic antecedent	There are alternative yet clear links between the specific form and its generic antecedent which can be revealed through volumetric addition and subtraction	There is no clear link between the specific form and its generic antecedent that can be revealed by volumetric addition or subtraction only	
There is the possibility of revealing an origin Viewing position is not significant to the reading	There is the possibility of revealing an origin An alternation of privileged viewing position	There is no possibility of revealing a stable origin No privileged viewing position	
No differentiation between frontal and oblique readings	Corners are narrative of the frontal and oblique readings	Due to disjunctions, the frontal and oblique readings cannot be resolved	
It is possible to find a dimensional datum	It is possible to find horizontal or vertical yet alternating datum	It is not possible to find a single or stable datum but multiple and oscillating data	

Figure 49. Textual Models, prepared by the author.

Textual reading contributes to the generation of knowledge since it leads to the invention of new “states”, which are not apparent in final form. In the textual-analytical model such states are usually abstractions on plan and elevation; yet do not correspond to the final state of the plan. Hildner and Rowe’s analysis of the Villa Stein can be considered an example to such invention. [Figure 3, 6] In textual-transformational and textual-decomposition, intermediary states are introduced that lead from a hypothetical beginning to an end. In textual-transformation, such states are partially sequential which means that although there is no linear sequence from a beginning to the end (built form), some states can be traced as coming after the other. [Figure 21, 22, 23] In textual-decomposition, however, these states are neither sequential nor traceable. [Figure 47] These intermediary states, which do not exist yet can only be invented through textual-transformation and textual-decomposition, can be exemplified by Eisenman’s schematic drawings of the Casa del Fascio and the Casa Giuliani-Frigerio respectively. In all three models, the intermediary states are absent and their presence is generated by articulation of the indicators.

Another way of generating knowledge through textual reading is the invention of new “instances” of a precedent. Such a condition can be exemplified by Wittkower’s reading of Palladio’s villas. Here, Wittkower conducts a planimetric reading of 11 villas by Palladio and reveals what is common to all these villas. It can be said that these villas are considered as instances of the same precedent, which accommodates the quality of the ideal. In other words, these 11 villas are considered as variations of an original one, which carries the common characteristics of all these villas and such characteristics is the one which makes these villas ideal. Although this villa, which contains the information of the ideal, does not exist in reality, Wittkower invents a 12th villa, which is an instance of what can be called an ideal villa and contains the knowledge of nine-square grid. [Figure 9]

In this sense, textual reading can be associated with “implication” of an object rather than its physical presence in reality. According to Eisenman:

In addition to provoking formal reading, buildings can equally be read as textual, offering different modes of reading, which may challenge established architectural vocabularies. For example, Alberti's superposition of the Arc of Titus over the vernacular Greek temple-front at Sant' Andrea becomes textual, because this montage of architectural forms from different historical periods destabilizes single meaning. The textual provokes a reading outside of the facts of an object's physical presence, or the underlying structures which govern its being [...]²⁴⁸

The reading of Sant Andrea as superimposition of two types is significant because these types belong to different historical periods.

Formal reading, which takes into consideration history, context, intent, and function aims at deciphering what lies beneath a precedent. The assumption is that a causal link can be established between history, context, intent, function and the final form. Establishing this link stabilizes the meaning and hinders the possibility of generating knowledge. In such formal reading, the aim is to find knowledge. However, textual reading divorces the precedent from its historical, contextual, intentional, or functional connotations and destabilizes meaning. Such destabilization opens the door for generation of new knowledge.

The second dimension of textual reading is that it contributes to the generation of new form. The idea of reading precedents as way of generating new form can be discussed in relation to Bloom's theory of misprision and Rifkind's translation of this idea to the domain of architecture. Bloom's theory of misprision indicates that while a poet may be influenced from one of his/her predecessors, such influence are not necessarily imitative. Poetic influence may be creative when it is applied by a strong poet. In the "Introduction" of *The Anxiety of Influence*, Bloom explains the main objective of the book as defining poetic influence and misprision as a creative act:

This short book offers a theory of poetry by way of a description of poetic influence, or the story of intra-poetic relationships. One aim of this theory is corrective: to de-idealize our accepted accounts of how one poet helps to form another. Another aim, also corrective, is to try

²⁴⁸ Eisenman, *Ten Canonical Buildings 1950-2000*, 29.

to provide a poetics that will foster a more adequate practical criticism. Poetic history, in this book's argument, is held to be indistinguishable from poetic influence, since strong poets make that history by misreading one another, so as to clear imaginative space for themselves.²⁴⁹

In this sense, poetic influence does not necessarily result in imitation of an already existing form, but in the invention of new form.

According to Bloom what differentiates the notions originality, imitation, and invention lies in the method of reading:

But poetic influence need not make poets less original; as often it makes them more original, though not therefore necessarily better. The profundities of poetic influence cannot be reduced to source study, to the history of ideas, to the patterning of images. Poetic influence, or as I shall more frequently term it, poetic misprision, is necessarily the study of life-cycle of the poet-as-poet.²⁵⁰

Such study of life-cycle of the poet-as-poet can be related to Eisenman's studies of Terragni's buildings: Casa del Fascio and Asilo Infantile (Sant'Elia) in his dissertation, *Formal Basis of Modern Architecture*, and Casa Giuliani-Frigerio in his article "From Object to Relationship II", and again Casa del Fascio and Casa Giuliani Frigerio in his book, *Giuseppe Terragni: Transformations, Decompositions, Critiques*.

Referring to Bloom's theory of misprision, Rifkind argues that Eisenman was influenced from Terragni in a similar way:

The striking compositional affinity between two photographs, taken in different decades, continents, and political contexts, of two buildings that differ dramatically in size, program, site, and materiality, presents a conundrum for any conventional understanding of the relationship between a work of architecture and its precedents. It is not surprising that Peter Eisenman represented House II, a two-story house he designed for a couple in Vermont in 1969, in a self-conscious homage to the work of Giuseppe Terragni, whose work the American architect

²⁴⁹ Bloom, 5.

²⁵⁰ Ibid, 7.

studied at great length in a doctoral dissertation completed six years earlier.²⁵¹

Through a textual reading of Terragni's buildings, Eisenman develops an architectural vocabulary and constructs an architectural language which he can utilize in his buildings. The idea of developing a vocabulary from a precedent and constructing a new language indicates the generative aspect of precedent and textual reading.

Appreciating the generative role of precedent, in their book *Precedents in Architecture: Analytic Diagrams, Formative Ideas, and Partis*, Roger Clark and Michael Pause also develop a set of vocabulary for understanding architectural precedents. This set of vocabulary is composed of some major themes such as structure, natural light, massing plan to section or elevation, circulation to use-space, unit to whole, repetitive to unique, symmetry and balance, geometry, additive and subtractive, and hierarchy. By introducing such vocabulary through which architectural precedents

By making available the information that is presented in this volume, we hope to expand the understanding of precedents in architecture; to illustrate an educational technique that is useful to students, educators, and practitioners; and to demonstrate an analytic technique that can have impact on architectural form and space decisions.²⁵²

By providing a vocabulary for analysis, the book is aimed to help both architects and students of architecture to understand the work of others in a way to influence them in creating their own designs.²⁵³

Clark and Pause also argue that precedent is not necessarily historical and the historical understanding of precedent has a limiting effect on design thinking:

²⁵¹ Rifkind, 66.

²⁵² Roger H. Clark and Michael Pause, *Precedents in Architecture: Analytic Diagrams, Formative Ideas, and Partis* (New Jersey: Wiley and Sons, 2012), vi. In the book Clark and Pause, analyze a total of 118 buildings with reference to some major themes such as structure, natural light, massing plan to section or elevation, circulation to use-space, unit to whole, repetitive to unique, symmetry and balance, geometry, additive and subtractive, and hierarchy.

²⁵³ Ibid.

The renewed and growing interest in architectural history and historic architectural example has focused the need to clarify the link between history and design. History studied in the academic sense of seeing our place within a continuum, or in the strictly scholarly sense of knowing the past, can limit our knowledge as architects little more than, names, dates, and style recognition. Seeing between and beyond the layers of historical styles, within which architecture is generally categorized and presented, can make history a source of enrichment for architectural design.²⁵⁴

Utilizing a set of diagrams depicting the formal and spatial configurations, the authors intend to represent the essential characteristics and relationships in each building.²⁵⁵

Clarke and Pause also separate the buildings they analyze from their social, political, or economical context. Though Clarke and Pause's assumptions are similar to the ones put forward in this thesis, one major difference is that Clarke and Pause have no intention to read the buildings textually. The major themes they utilize to analyze the buildings are formal rather than textual. To clarify this proposition, the example of natural light can be given. Relating the size, location, shape or frequency of openings to natural light can be considered as a causal link attributed to these two variables. This causal link defines certain propositions as true and other as false. The idea of causal link between intent/function and the specific form at hand is a proposition that this thesis deny. Therefore, it can be said that, how Clarke and Pause approach to the notion of precedent is similar to this thesis, yet their methodology is different.

6.3 Implications for Architectural Education

Having already developed a conceptual basis for the understanding of precedent in architecture, this section aims at revealing its pedagogic implications. Although precedents are generally used in architectural education -both in design and history courses-, their pedagogical potentials are not fully explored. Considering textual

²⁵⁴ Ibid., xiii.

²⁵⁵ Ibid., xiv.

reading as both an analytical and a generative act suggests that textual reading of precedents may facilitate architectural education as well. That is to say, the potential of precedent in generating knowledge and form can also be utilized in design education. The conceptual framework which defines precedent as a trans-historical concept and the textual models developed here suggests that these models can be utilized in architectural education for both analysis and design generation.

Precedents have been utilized in architectural education of *Ecole des Beaux-Arts* since late 1800s, however, they were conceived to be related to typology.²⁵⁶ Precedents were analyzed in terms of accepted aesthetic theories and structural or organizational norms, and then were transformed into *partis*. Certain *partis* were considered “ideal” for certain type of buildings and when the students were assigned a design problem, they were expected to solve it by applying the ideal *parti*. Likewise, the success of their designs were measured in relation to the proper application of the compositional principles brought by the specific *parti*.²⁵⁷ Such conception of architectural precedent is historical and suggests a normative type of design education rather than a critical one.

As opposed to *Beaux-Arts*, the pedagogic approach of *Bauhaus* prioritized knowledge of technique and material in the curriculum, questioning the relevance of precedents in design and education.²⁵⁸ The architectural precedent, which was the generator of design and the main instrument of *Beaux-Arts* pedagogy, was now seen as a barrier against creativity and invention.²⁵⁹ Besides excluding the precedent from the design studio, *Bauhaus* pedagogy also introduced a gap between history and design within

²⁵⁶ Hyungmin Pai, *The Portfolio and The Diagram: Architecture, Discourse, and Modernity in America* (Cambridge: The MIT Press, 2002), 193.

²⁵⁷ Ibid. Also see Alberto Pérez-Gómez, *Architecture and Crisis of Modern Science* (Cambridge: MIT Press, 1983).

²⁵⁸ Yüncü, 151.

²⁵⁹ Betts, 4.

the architectural undergraduate curriculum. The educational reform in *Bauhaus* also influenced other architectural schools especially the ones in America. Then, after a while, the precedent was reintroduced to undergraduate curriculum.

Rowe can be considered as one of the most important figures who sought for the reintroducing of precedent to architectural education since he argues that precedent is a prerequisite of invention and it is not possible to “think or act” without referring to a precedent:

Well, one thinks about the lawyer with a whole library bound in blue morocco behind him. This is the inventory of cases bearing upon the specific case that he is required to judge. So simply to pronounce a legal innovation, to discriminate the new, our jurist is obliged to consult the old and the existing; and it is only by reference to these that genuine innovation can be proclaimed. For are not precedent and invention the opposite sides of the same coin?²⁶⁰

In “Program and Programs” discussing the role of Rowe in shaping the scope of architectural history courses in Cornell University, Christian F. Otto states that Rowe’s pedagogical approach considered precedents as “evocative objects that promoted invention; they stimulated the mind and the eye; they could be mined and transformed.”²⁶¹

One of the most significant aspects of Rowe’s approach is that he does not conceive the precedent as a historical concept. The internal memorandum prepared by Rowe and his colleagues at the University of Texas, Austin suggests that, as opposed to the classical examples instrumentalized in *Beaux-Arts* pedagogy, significant examples of modern movement can also be considered as precedents and utilized in design education without typological reference:

The cornerstone of the memorandum was the conviction that architectural design, specifically modern architectural design, could be taught; that there existed a large number of significant buildings and projects within the so called modern movement; that these examples

²⁶⁰ Rowe, Letter to the Editors, 189.

²⁶¹ Otto, 52.

demonstrated certain basic principles; and that it was now possible to analyze these examples and to understand and extract from them a workable, useful body of architectural theory.²⁶²

Such conception of divorcing the architectural precedent from historical connotations can be considered as a trans-historical approach.

Another aspect of Rowe's pedagogical approach is that he intends to re-integrate history to architectural education by way of introducing the precedent as a pedagogical tool. According to Caragonne, "the reintroduction of architectural history as a vital, practical stimulus in the design studio was one of the most telling aspects of Rowe's tenure at the school [The University of Texas]".²⁶³ As opposed to *Bauhaus* teaching, which denies the relevance of history in architectural education, Rowe argues that precedents are historical materials which are not necessarily historic. Precedents as sources of ideas provide students of architecture "the necessary intellectual foundation for their own personal voyages of exploration and discovery".²⁶⁴

The Analysis Problem which is developed in University of Texas exemplifies such the idea of "precedent as invention" in architectural education.²⁶⁵ The main objectives of the assignment is defined as familiarizing the student with classics of Modern Architecture, enlarging the student's repertoire of architectural concepts, improving abilities to read architectural drawings, developing an understanding on structural concepts, and creating an awareness of space-structure relationship.²⁶⁶ Besides

²⁶² Caragonne, *The Texas Rangers: Notes from the Architectural Underground*, 1995, 33.

²⁶³ Ibid., 137.

²⁶⁴ Ibid.

²⁶⁵ Ibid. The analysis problem was conducted in 1956-1957. Each student was assigned a building, and expected to analyze this building in terms of space sequence, structural system, planes, volumes, a sequence of views, and the relation of space to structure. They were expected to represent their findings in a 1/8 scale model.

²⁶⁶ Ibid., 269.

analysis, the problem also involves two other aspects: representation and invention.²⁶⁷ Although, there is no specific method of analysis or link to textual reading, utilization of the precedent as a source of invention in University of Texas is significant because it affirms that the precedent can be reconceptualized as a trans-historical concept and utilized in architectural education in a way to stimulate the students' "spiritual and intellectual growth".²⁶⁸

Instrumentalization of the precedent in architectural education also indicates the shift from an inductive approach of education to a deductive one. John Shaw, one of the studio instructors in Texas, states that the analysis problem is conceived both as a research and design activity:

The Analysis Problem as it later evolved was seen *as an inversion of the design process* in that you start with the finished design and take it "backwards" *through a series of both analytical and interpretive abstractions* to diagrams comparable to those initial idea sketches that might initiate a search. This is instructive about both the building in question and also the students' own working method.²⁶⁹

Though the scope of the Analysis Problem does not have a one-to-one correspondence to the methodological aspects introduced in this thesis, it is significant in terms of indicating the potential of architectural precedent in initiating design.

Reintroducing the precedent as a pedagogical tool, the analysis problem also reintegrates history into the undergraduate curriculum. As Shaw argues:

Looking again at examples from history in a design studio was another aspect of the teaching that I think was fairly unique and definitely unlike Bauhaus teaching. The Bauhaus had thrown out history and most modern architects and Schools of Architecture followed suit. History was a separate course of study with no bearing on design. It was seen

²⁶⁷ Ibid., 272.

²⁶⁸ Ibid, 37.

²⁶⁹ Ibid. Emphasis added.

as something out of touch that had nothing to do with modern life, nothing to do with modern problems.²⁷⁰

That is to say, besides its generative potentials which can be utilized in design education, the precedent also houses the potential to mediate between history and design.

Another precedent exercise which considers the precedent as a source of invention is developed in Irwin S. Chanin School of Architecture of Cooper Union by Richard Henderson, which exemplifies the utilization of creative misreading in architectural education. The analysis is composed of five steps re-composing plans-sections-elevations, using opaque paper to block any part or to eliminate a line, using transparencies to juxtapose lines and parts, alter composition by inserting other materials, or previous compositions, and further cropping and collaging of prints is always possible.²⁷¹ The operations of blocking, eliminating, juxtaposing, inserting, cropping, and collaging alter the existing composition turning into a new one. Since the new composition does not preexist within the original object, the process of analysis here can be considered as a form of redesign and creative misreading.

According to Henderson, the most significant aspect of this analysis is “the establishment of an order- a compositional framework within which the object could be re-created and given definition in relation to its own history”.²⁷² This exercise considers the precedent as an unfinished form rather than a finished one waiting to be decomposed and understood in terms of its already existing properties. Therefore, it suggests that new forms can be generated through a misreading of a precedent. In Henderson’s words, the exercise stimulates “the possibility of creating wholly new compositions” which “transcends” the object itself.²⁷³ That is to say the conception of

²⁷⁰ Ibid., 330.

²⁷¹ Ibid., 73.

²⁷² Ibid.

²⁷³ Ibid.

precedent as unfinished form contributes to the idea of misreading as a generative act.

Similar to the Analysis Problem of University of Texas, Henderson's exercise also approaches the concept of precedent from a trans-historical point of view, through which new knowledge and form can be generated:

Presented to the student simply as a list of renowned works of Architecture for investigation, analytical studies occupy only a tangential relationship to conventions of critical historical analysis and archaeological examination. Customary research, initial dissections and the devising of inventive methodologies are, of course, essential preparations for the true creative intent of these projects. To seek only to undo the profound amalgam of a masterwork is to invite with surety its imminent death. Neither the definitive explosion of fact nor the meticulous rendering of description can hope to evoke the mysterious life embodied in enduring Architecture. And it is precisely this evocation, this sense of inexplicable insight, presented visually, which is the ultimate purpose of these deep probings. The analysis is didactically a beginning, an instrument of search, a seed for exploration, and a natural ground of discovery.²⁷⁴

However, as Henderson argues, in order to generate new knowledge and form new methodologies should be invented such as the operations of misreading: blocking, eliminating, juxtaposing, inserting, cropping, and collaging.

Eisenman argues that the aim of precedent analysis in architectural education should be to teach the students how to see as an architect; that is, seeing with the mind:

[A]n architect must learn to see beyond the fact of perception. An architect must see as an expert. This expertise implies two things. First, being able to see, as a form of close reading, the not present - the unseen. Second, and more importantly, an architect is a maker, not just a reader. In order to make what contains 'what cannot be seen,' one has to know

²⁷⁴ Richard Henderson, *Education of an Architect*, New York : Rizzoli, 1988, 71. The precedents analyzed within the scope of this exercise are: Sagrada Familia, Carpenter Center, Maison du Peintre Ozenfant, De Handelsblad Cineac, Le Palais du Gouverneur Chandigarh, S. Ivo Alla Sapienza, S. Carlo Alle Quattro Fontane, Medici Chapel, Villa Farnese, Tempietto Di S. Pietro, Chartres Cathedral, Pantheon, Spiral, Pier Museum, Roosevelt Island Housing Project, Urban House, Urban House under the Manhattan Bridge, Residency and Studios for Fellowship in the Visual Arts, Sliding Door System, and Studio for Modelmaker.

what that is, i.e. in order to make what can be close read, one has to know first how to close read.²⁷⁵

Seeing with the mind is associated with textual reading, and it is different from what the eye sees optically.

In *Ten Canonical Buildings*, Eisenman explains that in defining close reading or seeing with the mind, he was influenced by his mentor Rowe's approach to precedent:

Colin Rowe first taught me how to see what was not present in a building. Rowe did not want me to describe what I could actually see: for example, a three-story building with a rusticated base, increasingly less rustication in each of its upper stories, and with ABCBA proportional harmonics across the façade, etc. Rather Rowe wanted me to see what ideas were implied by what was physically present. In other words, less a concern for what the eye sees –the optical- and more for the mind sees –the visual.²⁷⁶

The optical is visible and obvious; it does not allow ambiguity. The visual and conceptual, however, is not obvious. The ambiguous conditions which cannot be seen with the eye can be interpreted with the mind. The idea of interpretation is significant because it results in multiple, alternating, or oscillating readings.

A graduate course in the Middle East Technical University titled “Formal Analysis of Buildings” by Berin F. Gür is a course which aims at provoking this kind of seeing.²⁷⁷ The course has been conducted for 3 semesters and the author of this thesis has contributed to the course as a guest participant. During the course, the students were expected to analyze 15 buildings by Behruz Çinici and Altuğ Çinici within the Middle East Technical University Campus.²⁷⁸ The most significant aspect of the course is that

²⁷⁵ Peter Eisenman, Syllabus of “Formal Analysis: Close Reading and Formal Design,” Yale University. <http://architecture.yale.edu/courses/formal-analysis-2014>.

²⁷⁶ Eisenman, *Ten Canonical Buildings 1950-2000*, 16.

²⁷⁷ Berin F. Gür, Arch 778 Formal Analysis of Buildings Course Outline, Spring 2014.

²⁷⁸ The List of buildings examined: School of Foreign Languages Department of Basic English, Faculty of Economic and Administrative Sciences, Faculty of Architecture, Library, Mathematics and Social Sciences, Physics Amphitheater, Faculty of Arts and Sciences Dean's Office and Physics Building,

it acknowledges that there is no single method which can be used to read all buildings. Rather, the method of reading is inherent to the building. Therefore, the method of analysis applied in each building is different.

Another significant aspect of the outcomes of the course is that, all readings overcome some canonical interpretations about the buildings in question and the intentions of their architects. One example to such reading is the reading of Department of Architecture. [Figure 50] The Department of Architecture building at METU is usually associated with the approaches of the 1950s such as mat-building or in more generic terms a three-dimensional organization which is composed of cells and clusters such as the Amsterdam Orphanage by Aldo Van Eyck. [Figure 51, 52] The idea of establishing links between two buildings in terms of time of construction and formal aspects can be considered as seeing with the eye. Such link between METU Department of Architecture and Amsterdam Orphanage is more obvious when compared to Rowe's link between the Villa Foscari and the Villa Stein which is more ambiguous.

The method of analysis applied by Seray Türkay and Hayri Dörtdivanlıoğlu within the scope of the course is very different from the conventional approach in that it does not refer to a gridal organization of cells and clusters. It suggests another way of reading the building which is based on the axis of entry when approached from the main *allée* of the campus. The building is conceived as made up of spatial layers perpendicular to the axis of entry which generates movement within the building. While the layers perpendicular to this axis are conceived as generative layers, the ones which are parallel are conceived as bounding layers. [Figure 53] The idea of generative layers perpendicular to the axis of entry is similar to Eisenman's conception of surface plane and analysis of the Casa del Fascio as a cube composed of successive layers like "pack of cards". This kind of reading "what is not obvious in the building" is textual and is a way of redesigning the building. [Figure 54]

Physics Classrooms, Rectorate, Cafeteria, Faculty of Engineering Central Building, Department of Electrical and Electronics Engineering, Computer Center, and K3 and Hydraulic Lab.



Figure 50. Model of Faculty of Architecture Building, photo by Haluk Zelef [Wojciech Niebrzydowski and Haluk Zelef, Brutalism and METU Department of Architecture Building in Ankara, 2012, 24]

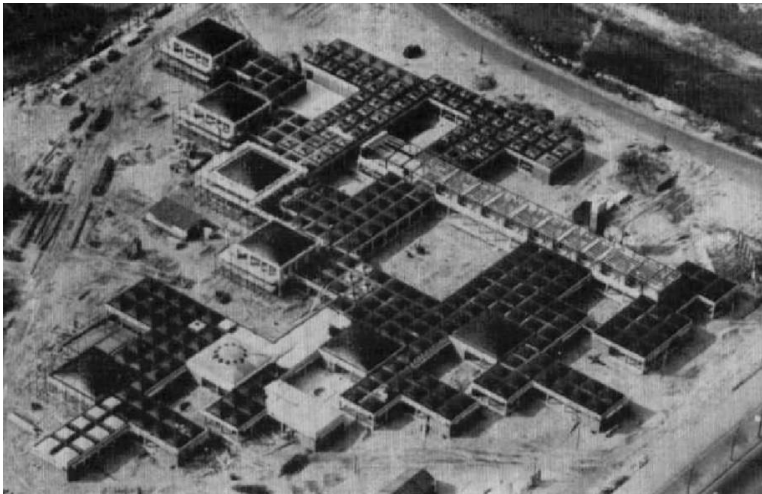


Figure 51. Amsterdam Orphanage Building by Aldo Van Eyck [Melih Yüksel, Relevance of Team 10, 38]

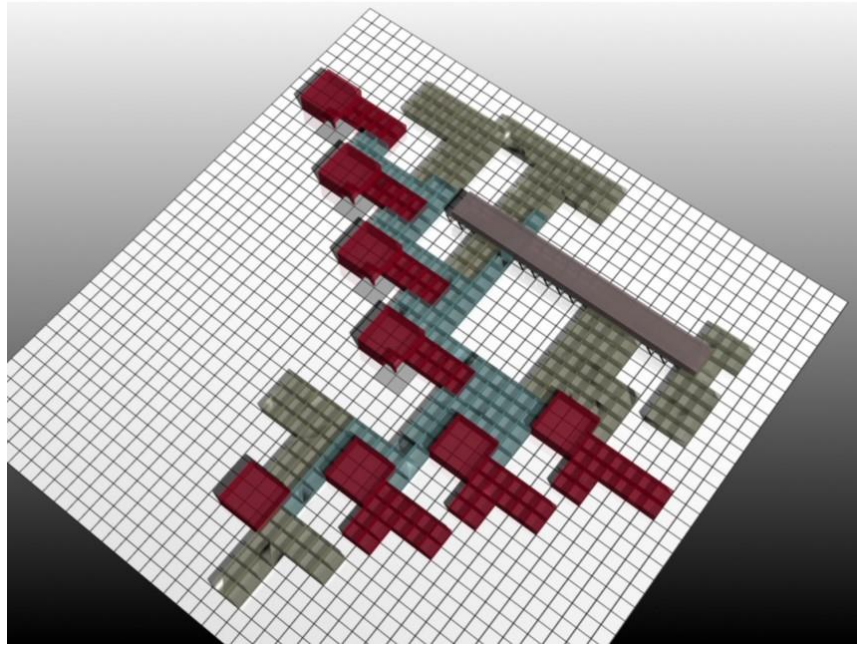


Figure 52. Analyses of Amsterdam Orphanage Building by Melih Yüksel [Melih Yüksel, Relevance of Team 10, 70]

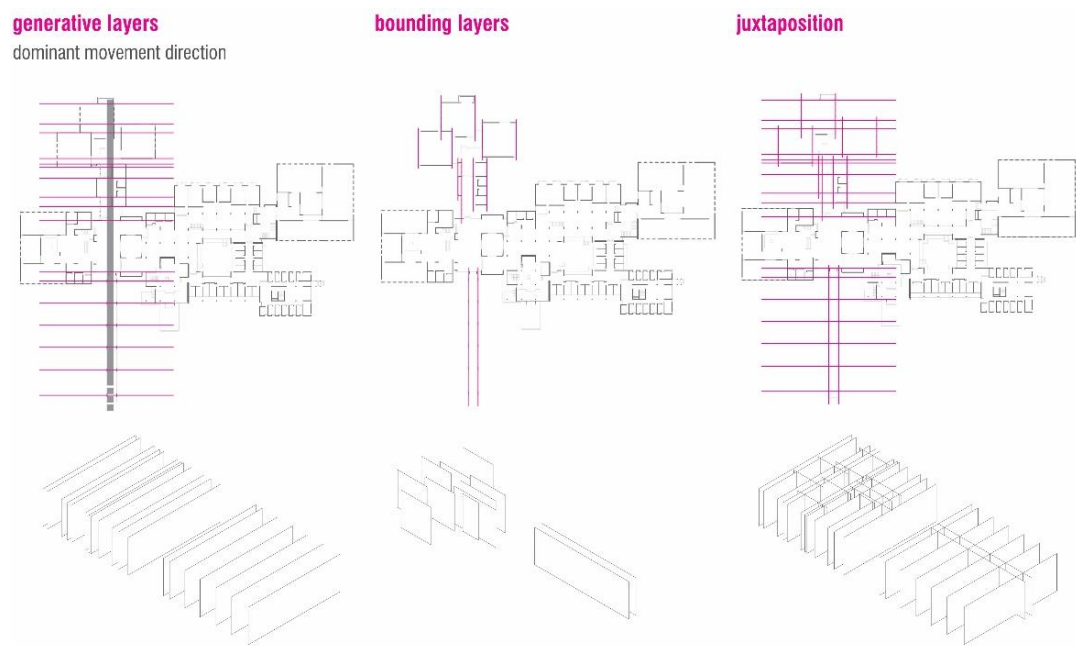


Figure 53. Arch 778 Student Work, Analysis of Faculty of Architecture Building by Seray Türkay and Hayri Dörtdivanlıoğlu, displaying Entry as a vector generating movement.

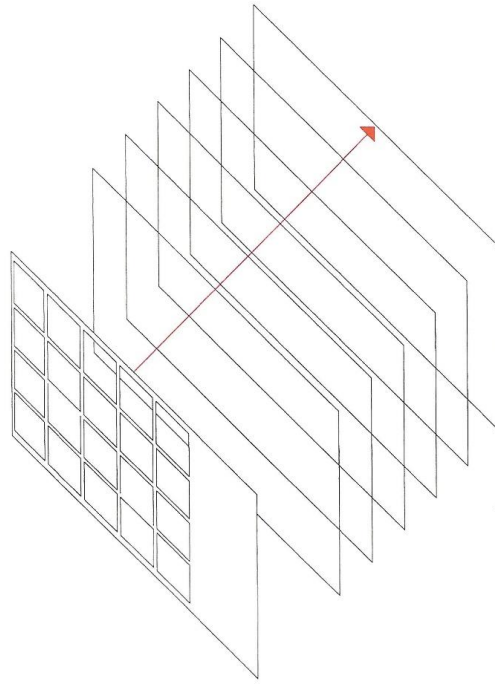


Figure 54. Axonometric drawing by Eisenman showing entry vector. [Peter Eisenman, *Giuseppe Terragni: Transformations, Decompositions, Critiques*, 107]

The outcomes of the analysis of these 15 buildings also indicate that the textual models developed in this thesis are applicable to different cases. An example to such applicability is the analysis of Department of Basic English. The analysis of the building is based on the assumption that the corners of the building seem to be carved out from a prism. In order to explore the carve-out condition of corners, the building is first completed to a hypothetical whole of rectangular prism with dashed lines. [Figure 55] Then the characteristics of the corners and the relationship of facade planes are explored. Though the facades of the buildings seem unrelated to each other at the first sight, referring to the corner analysis, the facades may be read as continuous because the corners are almost “resolved”. [Figure 56] The idea of completing the specific form into an ideal generic form and investigating the corner conditions is the characteristics of the textual-transformational model. [Figure 57]

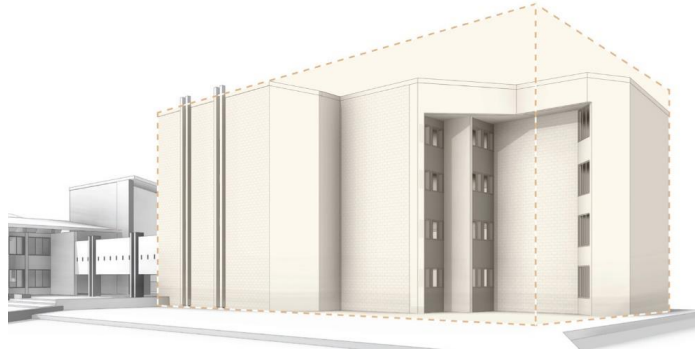


Figure 55. Arch778 Student Work, Analysis of The School of Foreign Languages Department of Basic English Building by Melike Emerce and Gökçe Bayat displaying corner condition.

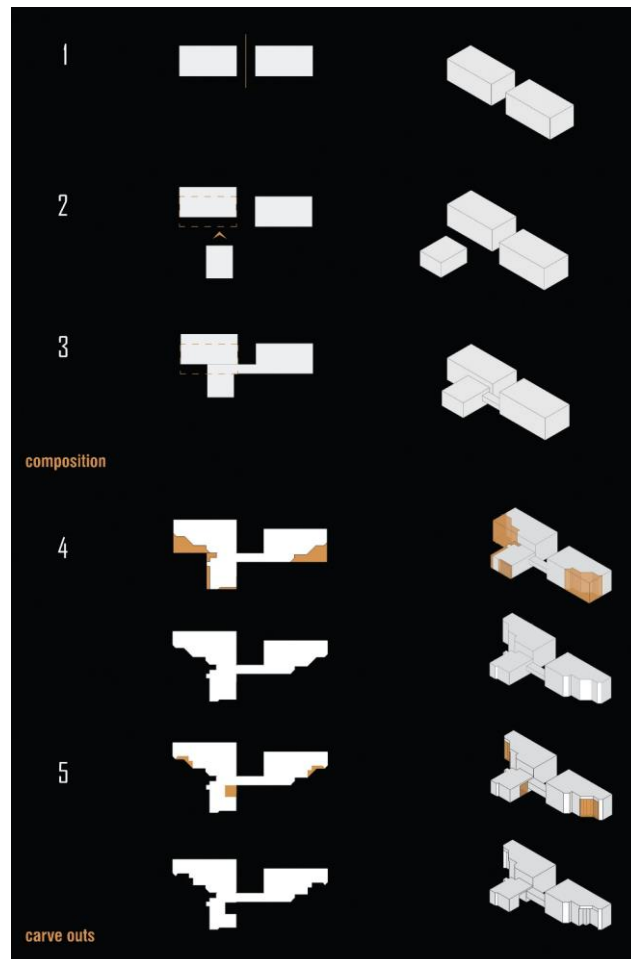


Figure 56. Arch778 Student Work, Analysis of The School of Foreign Languages Department of Basic English Building by Melike Emerce and Gökçe Bayat displaying corner conditions.

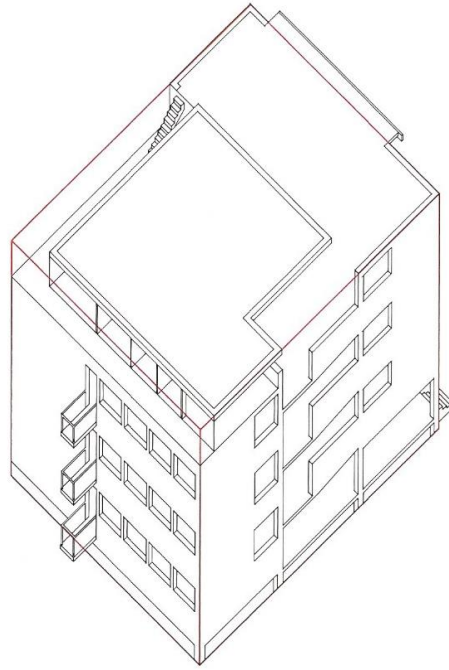


Figure 57 Axonometric drawing by Eisenman, corner condition and completeing the form into its generic antecedent [Peter Eisenman, *Giuseppe Terragni: Transformations, Decompositions, Critiques*, 162]

Another building which exemplifies applicability of the textual models developed in this thesis is the Department of Mathematics and Social Sciences building which is perceived as two separate blocks when they are observed from the main alleé. [Figure 58] The first step of the method of analysis is to investigate the similarities between these two blocks in terms of their plan organizations and elevations. In doing so, it is seen that the plan drawings of the two blocks are more or less mirror images of each other, surrounding a positive outdoor space or a courtyard. Then, the two blocks are combined in a way to produce a hypothetical symmetrical state through which the final form has evolved. The symmetrical state obtained during the analysis a new form generated through textual reading and such reading of the building with reference to a hypothetical symmetrical state is akin to the decompositional processes developed in this thesis as well as Eisenman's analysis of Giuliani-Frigerio. [Figure 59]

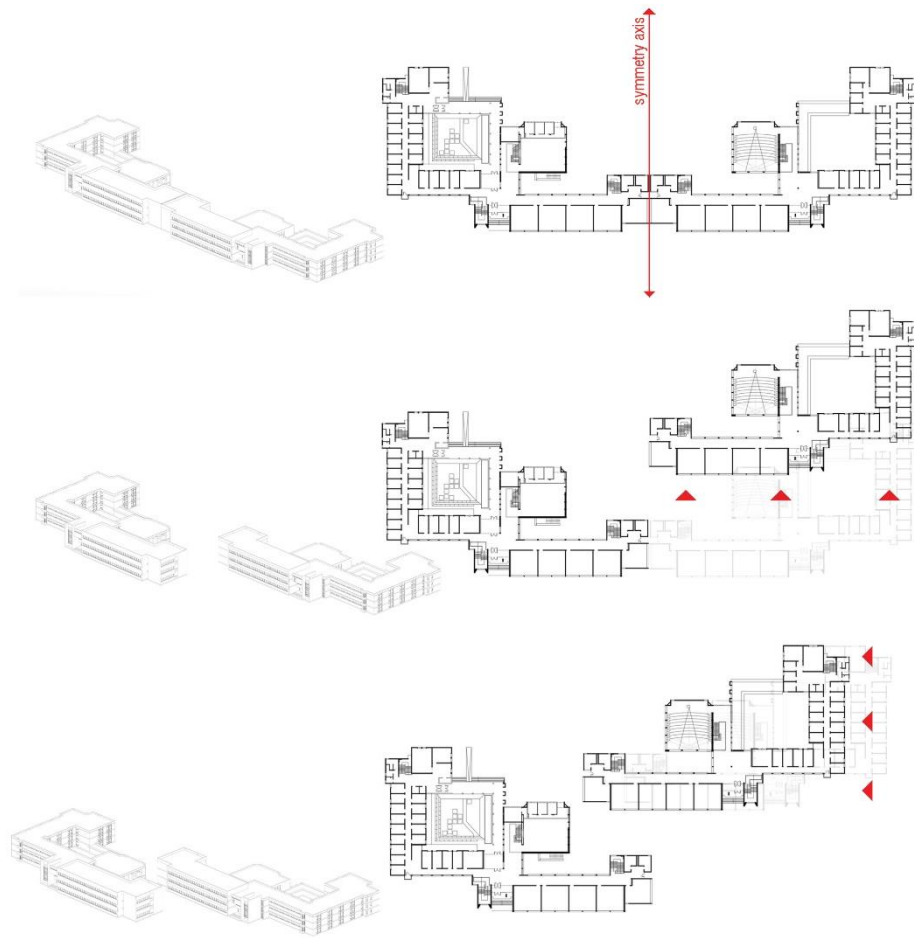


Figure 58. Arch 778 Student Work, Analysis of Mathematics and Social Science Buildings by Cana Dai and Erkut Sancar, displaying techniques and restoring to an ideal symmetrical state.

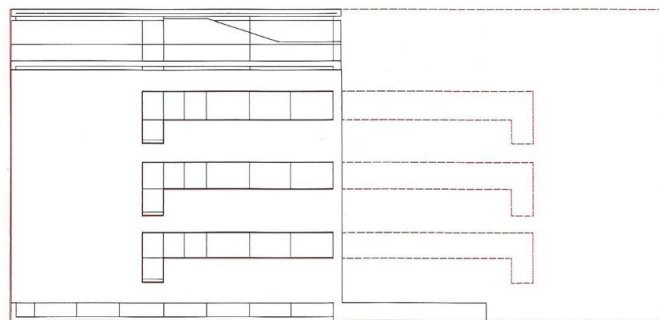


Figure 59. Schematic Drawing by Eisenman restoring Casa Giuliani-Frigerio to an ideal symmetrical state. [Peter Eisenman, *Giuseppe Terragni: Transformations, Decompositions, Critiques*, 175]

The readings produced by the students within this course are alternative readings of these 15 buildings and do not claim to be the only ways of reading. They are more exploratory than descriptive and focus on understanding the architectural objects without referring to function and intent. In such processes of reading precedents, the process of reading is as important as the knowledge generated by it. These analyses also indicate that, even the buildings which do not seem to have an apparent design principle at first sight can be read textually in a way to generate new knowledge. Therefore, the outcomes of the course affirm that all buildings can be read textually, yet, there is no single method to read all buildings because the method of reading is inherent to the object and its processes of making.

CHAPTER 7

CONCLUSION

This dissertation has developed a theoretical framework in which the act of textual reading of precedents is considered as generative and regenerative as well as analytical. The epistemological and methodological aspects of such reading indicate that the architectural precedent houses generative potentials which can be utilized in architectural design and education. The aim of this thesis was to reconceptualize the precedent in a way to reveal these potentials. It was argued that revealing these potentials was necessary to instrumentalize the precedent in architectural design and education in a systematic manner. The main contribution of this thesis is that it prepares the ground for such instrumentalization.

This dissertation contributes to the discourse of the precedent by defining textual reading as a generative act which operates in two dimensions: generation of knowledge and generation of form. Textual reading of precedents is a way of generating knowledge because it does not intend to derive already existing information underlying a built form. It is argued that the knowledge of precedent is made rather than found. Textual reading of precedents is also a way of generating form because the process of misreading is at the same time a process of design and redesign. In this respect, the textual reading of a precedent results in new form which transcends the object in question.

The conceptual basis of this thesis is that architectural precedent can be redefined from a trans-historical point of view. Although the precedent operates between history and

tradition as well as history and design, the term is not necessarily historical. The main assumption of this thesis is that the term precedent can be divorced from the historical connotations previously attributed to it. As opposed to the historical precedent which represents a specific style or period, trans-historical precedent cannot be limited to a style or time. In this sense, the precedent as reconceptualized in this thesis is not a tool for historical exploration but for design generation. The idea of precedent as a generative tool turns it into a design instrument which can be utilized by students of architecture as well as practicing architects.

The epistemological aspects of precedent change according to how it is approached. An architectural historian approaches the precedent through rigorous methods trying to understand why and how a certain artifact is the way it is. Therefore, the historian has no concern of utility. The architect, on the other hand, approaches the precedent differently in a way to generate practical knowledge which s/he can utilize in future design problems. The main concern of the architect is pragmatic. The knowledge derived from the precedent by the historian is contextually and historically situated, whereas the knowledge generated by the designer architect is generic and applicable regardless of context and time.

The methodological aspects of precedent are defined with reference to textual reading. Textual reading of precedents differs from a formal reading because its methodology is anti-methodical. That is to say, there is no single way or single rigorous method for reading all buildings textually because the mode of reading is inherent to the object being read. Formal reading is in itself narrative and its methods depart from the assumption that the process of making is linear. However, textual reading is non-narrative. Each building can be read with an approach that is consistent with its process of generation. Such process can be considered as the internal history of each built form.

7.1 General Remarks

This dissertation has developed a theoretical framework which suggests that precedents are sources of disciplinary knowledge which can be activated by textual reading. They not only throw light upon the object in question but also suggest tools and principles which can be utilized in future design processes. Therefore, the disciplinary knowledge generated by textual reading of precedents is practical as opposed to the knowledge of history which is theoretical. That is to say, although the knowledge of precedent contains the knowledge of the past, it is not necessarily historical, thus precedent can be considered as a trans-historical concept. Relieved from its historical connotations, the architectural precedent has the potential to initiate generation new knowledge without crossing disciplinary boundaries and borrowing concepts from other disciplines than architecture.

Since, the disciplinary knowledge generated by textual reading of precedents has no truth claim, the theory of precedent developed in this thesis can be considered as weak theory rather than strong theory. That is to say, the main concern of this theory is not its truth claim in correspondence to reality, but rather the coherence of its propositions and the models of textual reading. Therefore, it can neither be empirically tested nor justified by rigorous methods. The theoretical framework developed here can be evaluated on the basis of applicability and practicality rather than its truth claim. Applicability of the three models to other architectural precedents and practicality of the knowledge in terms of its potential to be used in future design situations is the most significant concern of this study.

Though it is argued that the precedent is always open to further exploration and endless interpretation, three models of textual reading are proposed in this thesis through which architectural precedents can be understood in a comprehensive manner. These three models operate through different features which are called indicators. These indicators also suggest that certain models of textual reading are more applicable to certain precedents. That is to say, though all buildings can be read via these three models, not all readings result in the generation of new knowledge. Applicability of

these models is limited to the building's own process of making. Therefore, the models of textual reading developed in this thesis should not be considered as rigorous methods that can be applied to any building. Although this thesis develops three models, it does not argue that these are the only models for textual reading.

The three models developed in this thesis differ from conventional formal methods which are applied to precedents in an exhaustive manner. They are concerned with the ambiguous aspects of the building rather than its obvious aspects which are grasped in the immediate time of perception. In order to conduct formal reading one needs to see and experience the building themselves. However, textual reading does not require one to see the building. Experiencing the building may evoke questions related with the textual aspects of the building, yet, seeing the building is not a part of the methodology of reading. To exemplify, although Eisenman has travelled to Como with Rowe, and experienced Terragni's Casa del Fascio and Casa Giuliani-Frigerio himself, his readings do not involve his impressions of these buildings. The idea of excluding personal impressions and experience is significant in terms of the applicability of each model of reading and the practicality of the knowledge generated through this reading.

7.2 Implications for Future Research

Examples of precedent analysis exercises mentioned in the previous chapter shows that the instrumentalization of architectural precedents in architectural education is already a concern maintained by certain scholars and educators. Yet, the aforementioned uses of the precedent are more intuitive than systematized. It is argued that, the epistemological and methodological framework developed in this thesis may provide a ground for invention of new uses of precedent in architectural education. Therefore, future research may address the pedagogical potentials of precedents in more detail and focus on developing new exercises which may initiate creative design through precedent.

In doing so, it may be argued that Schön's reflective practice may help develop a systematic way for introducing precedents and generating design knowledge through textual reading. Reflective practice is concerned with both the generation of design knowledge and application of such knowledge during design processes. Schön's reflective practice suggests that designing is one important dimension of learning how to design. Considering these discussions on reflective practice, it can be argued that a design dimension can be added to precedent exercises in way to initiate processes of research by design. The exercise developed by Henderson as mentioned in the previous chapter houses certain clues for how a design dimension can be added to these type of exercises by developing and utilizing certain operations for creative misreading.

Another implication of this research is that, reconceptualized as a trans-historical term, the architectural precedent has the potential to mediate between history and design. The potential of the architectural precedent can be utilized to integrate history and design courses within the architectural undergraduate curriculum. The idea behind integration is that, in order for a professional knowledge to become comprehensive, all fragments of this knowledge should be integrated. Use of precedent in architectural education in a systematized manner may provide an option for integrating the knowledge of history to knowledge of design without interfering with the autonomy of these courses within the curriculum.

Today, unification of all relevant subjects and experiences in education for the sake of increasing students' learning outcomes has become an issue emphasized both by university policies and accreditation board standards. Although this notion of an integrated curriculum appears as an outstanding concern shared by the discipline of architecture as well, the requirements for an integrated curriculum stay unfulfilled. The typical undergraduate architectural curriculum still tends to fragment theory, history, and design courses, an approach which places a gap between theory and practice within the students' minds starting from the first day of their professional training.²⁷⁹ This

approach not only hinders development of integrative skills but also lacks in providing the students with the full body of professional knowledge they are required to attain during their undergraduate education.

A theme issue of *Journal of Architectural Education* titled “Beyond Precedent” attracts attention to the gap between history and design courses within the curriculum:

Although the National Architectural Accreditation Board (NAAB) requires that students understand historical traditions and global cultures, it does not mandate the method of instruction. Still, many schools offer a suite of architectural history lectures that are often perceived as distinct from studio topics.²⁸⁰

Editors Sandra Weedle and Marc Neveu note that they take as their premise “the notion that the relationship between history and design should be activated”.²⁸¹ Yet, they criticize the use of precedents for mere stylistic or technical diagnosis.

One of the questions of future research may be in how to overcome the gap between architectural history and design courses within the undergraduate education by instrumentalizing the precedent as a pedagogical tool. There are two different approaches related to the debate on the role of history courses within the architectural curricula.²⁸² One group argues that history courses have their own aims and methodologies that are distinct from those of design courses. This argument is associated with Manfredo Tafuri’s view of history as an autonomous discipline, rather than a practice ancillary to design.²⁸³ The other group holds an integrative approach, denying the possibility of such a split between architectural history and design courses. According to this group “the ultimate purpose of history should be no different than

²⁷⁹ Nur Çağlar ed., *Re-integrating Theory and Design in Architectural Education* Proceedings (Ankara: Nurol Matbaacılık, 2001).

²⁸⁰ Sandra Weedle and Marc Neveu, “Introduction: Beyond Precedent,” *JAE* 64, no. 2 (2011): 6.

²⁸¹ Ibid.

²⁸² Ibid.

²⁸³ Carla Keyvanian, “Teaching History to Architects,” *JAE* 64, no. 2 (2011): 25.

the purposes of other subjects in an architectural curriculum”.²⁸⁴ These groups are designated as “geologists” and “miners” respectively.²⁸⁵

Both approaches have their own pros and cons. Though Tafuri’s argument liberates history from its supporting role and sublimates it as an autonomous discipline, it alienates history courses to professional education. Without any connection to the design studio, which constitutes the core of the architectural education, history courses are exposed to the danger of serving merely as basic literacy courses. Although it is important that the students get acquainted with the architectural culture and the basic vocabulary, which they will encounter in the following years, it may be possible to increase the learning outcomes with a more integrative approach. As Randall Teal argues:

The lack of disciplinary and temporal overlap in typical university curricula and courses hinders development of the integrative skills required to confront the complexity of real situations. Certainly, beginners must develop a historical vocabulary, a facility with theory, and basic design skills. However, instead of separating these tasks, allowing them to co-evolve within the context of specific design problems produces a more integral understanding of history, theory, and design.²⁸⁶

However, the integrative approach has its own shortcomings, because it treats history as a mine to be explored for pragmatic purposes.²⁸⁷ Holding an intermediary position, future research may develop an integrative curriculum component to integrate history and design within architectural education so that the precedent exercises will not be considered as add-on to design courses. The theoretical framework developed in this

²⁸⁴ Richard Betts, “Historical Determinism, or Historical Precedent Be Damned,” *JAЕ* 34, no. 1 (1980): 4.

²⁸⁵ Wayne Attoe and Charles W. Moore, “Prologue: On Mining History,” *JAЕ* 34, no. 1 (1980): 1.

²⁸⁶ Randall Teal, “Foundational History: An Integrated Approach to Basic Design, History, and Theory,” *JAЕ* 64, no. 2 (2011): 37-45.

²⁸⁷ Weedle and Neveu, “Introduction: Beyond Precedent,” 6.

thesis may provide a basis for such utilization of precedent as a pedagogical tool which integrates history and design.

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