

PEIRCEAN INTERPRETATION OF POSTMODERN ARCHITECTURE

A Dissertation

by

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ABSTRACT

The influence of philosophy on architectural theory contributes to the formulation of architectural theory in the history of architecture. This relationship created the oscillation of architectural theory between rationalism and romanticism reflecting the woven tendency of philosophy such as enlightenment and counter-enlightenment movement. This dissertation research focuses on architectural language theory which maintains a tight relationship with the philosophy of language.

Postmodern architecture during the period of the 1970s through 1980s is examined to determine meanings of architecture, and the language theory of architecture. It followed the philosophy of language originated from Ferdinand de Saussure who influenced theorists, and explicitly sign theorists influenced by Charles Sanders Peirce. This theoretical underpinning of language theory is questionable because of an inappropriate application of the sign theory of Charles Sanders Peirce in terms of principal interpretation of language structure, dyadic and triadic type of language. This research re-interprets the meaning of architecture during postmodern period along with Peirce's semeiotic theory, and American Pragmatism that Peirce originally invented.

The collection of evidence from architectural history and the influence from philosophy provides a conceptual sketch that the oscillation of theoretical tendency is the source of architectural creation. This creative process is analyzable based on Peirce's sign theory and his logic. The research applies current Peircean scholars' development including 'Peircean Algebraic Logic' by Robert W. Burch to develop a conceptual model to frame Peircean interpretation.

The multiple-case study (four architects with eight architectures) demonstrates the effectiveness of the conceptual model to facilitate a Peircean interpretation of postmodern scenographic architecture and contextual postmodern architecture. The results of this interpretation draws the limitation of some type of scenographic

architecture that uses a proxy referential method, while Pragmatism provides the contents to Postmodernism's needs that is parallel to architectural theory.

DEDICATION

I dedicate my dissertation to my father and my wife. My father, Noboru Takahashi who is now in peace, who guided me, introduced to me the values, and the beauty of work in architecture, art, and construction during my early stage. His philosophy deeply influenced me. My wife, Brenda Takahashi supports my development beyond culture. Her insights assist me in finding solutions.

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I would like to express thankfulness to Mario Botta and his office, which provided me and allows me to use the photography of Mario Botta's architectures. Without these pictures my case studies on his work become less informative. Kindly, Indiana University Press allowed me to use figures of Peirce's logic from 'Peirce's Reduction Thesis' (Authored by Robert W. Burch) with gratis. In addition, Texas Tech University Press allowed me to use figures and quotations from passages of 'A Peircean Reduction Thesis: The Foundation of Topographic Logic' (Authored by Robert W. Burch) with gratis. These figures were extremely beneficial for me to understand the complex of

Peircean logic at conceptual level. Finally, I am thankful to my wife Brenda Takahashi who supported me during my research.

NOMENCLATURE

CMPL	Conceptual Model of Peircean Logic
CP	Cartesian Product
PAL	Peircean Algebraic Logic
QL	Quantificational Logic

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CHAPTER I

INTRODUCTION

I.1 Introduction

Architecture has to be meaningful, and this research is concerned with the system that assures meaningful architecture. Meaning is attached to architecture in order to express signification through a system of communication. The relationship between architectural form and the meaning attached to it with historical consideration appears to be a basic condition in order to make architecture. For example, at the beginning of modern architecture the notion of communicative architecture can be seen as “*architecture parlante*.”¹ Architecture explains its purpose through its form. Although, architecture is definitely that of the physical material world, the meaning of architecture is metaphysical. Architecture has an interpretive idea that is influenced by philosophy that designates metaphysics², linguistics³, and identity⁴. There is a connection between architecture as material and that of idea; however, this connection could be misguided and mislabeled. In the case of postmodern architecture, a system of a language in architecture is shallowly interpreted. One reason is that the practical use of architecture was populated at the consumer product level, and architectural expressions were

¹ Winand W. Klassen, *History of Western Architecture: A Semiological Approach to Architecture from a Designer's Point of View* (Cebu City, Philippines: University of San Carlos, 1980), 194. The term originated from a neoclassical architect Claude Nicolas Ledoux. Ledoux has two contributions for modern architecture including (1) “the value of simple geometric shapes” in his cubic spherical mass, (2) his “concept of a building as something as symbolic.” Although, there is an argument that his work as an expressionist, “this design technique was known as architecture parlante, ‘speaking architecture’.”

² Robert Maxwell, “The Individual Feeling for Collective Beauty,” in *Michael Graves Buildings and Projects 1982-1989*, ed. Karen Vogel Nichols (New York, NY: Princeton Architectural Press, 1990), 333-40. Robert Maxwell argued Michael Graves’ work between metaphysical or cubism collage.

³ Manfredo Tafuri, “L’architecture Dans Le Boudoir: The Language of Criticism and the Criticism of Language,” in *Architecture Theory since 1968*, ed. K. Michel Hays (Cambridge, MA: MIT Press, 2000), 160. Michael Graves’ works were understood by Manfredo Tafuri “as meaning ‘metaphysical and “the themes of polysemy and pluralism” are that of the closed system of “limited series of operations” with his own linguistic demonstration.

⁴ Identity of one’s relation to architecture provides the meaningfulness. Regarding Identity of architecture Able described that “the complex relations between architecture and human identity may be found in the process of cultural exchange.” See Chris Abel, *Architecture & Identity: Responses to Cultural and Technical Change* (Woburn, MA: Architectural Press, 2000; repr., Second Edition), 149.

renounced as mere commodities. Another reason is the theory of language in postmodern architecture was brought from a disagreeable source, Ferdinand de Saussure (1857-1913). My inquiry proposes we establish the right source through Charles Sanders Peirce (1839-1914), and reestablish the language theory of postmodern architecture.

Theorists of architecture applied a theoretical linguistics framework in order to understand the phenomenon and a language of postmodern architecture. The main linguistics theory was that of Ferdinand de Saussure who originated ‘semiology’ that was predominant in the 1960s and 1970s for architectural theorists. “Many semioticians of architecture have based their study on Saussure’s dyadic sign model,”⁵ that led the study of the comparison between architecture and language. For example, “Broadbent (1969) and others discuss[ed] the question whether the architectural code is a *langue* in the sense of Saussure.”⁶ I argue this application was a limited and unsuitable interpretation of a language theory for postmodern architecture.

Charles Sanders Peirce, the founder of American Pragmatism, formulated the theory of semeiotic. The formulated language theory by architectural theorists in postmodern architecture has attempted to include Peircean semeiotic theory without sufficient articulation of its structure. There is an essential difference between ‘semiology’ and ‘semeiotic’ in terms of its fundamental structure. Architectural theorists did not articulate this difference between the two sign theories correctly, and applied them to the language of postmodern architecture. If this is true, we have a legitimate reason to seek a plausible language theory of postmodern architecture which is based on Peircean semeiotic, and the philosophy of American Pragmatism. This process requires careful consideration regarding the relationship between philosophy and the theory of architecture. Philosophy has ramified German idealism to existentialism, phenomenology, pragmatism, and postmodernism. Similarly, architecture has moved

⁵ Winfried Nöth, *Handbook of Semiotics* (Bloomington, IN: Indiana University Press, 1990), 437.

⁶ *Ibid.*, 438.

from *high modernism*⁷ to postmodernism. When this shift occurred, like the shift from classicism to modernism there was a creative evolution in style and movement. For example, Michael Graves' figurative architecture was discussed by Christian Norberg-Schulz (1926-2000). Figurative architecture is to reestablish the meaning of architecture in postmodern architecture. "An architectural figure is a namable thing which gathers earth, sky and the between of human life."⁸ This follows Heidegger's conception of 'thing.' Figurative language of architecture is based on past, but expresses future. Norberg-Schulz explained the existential aspect of Graves' language of architecture. The specific interest of this research is a language of architecture based on postmodern historicism, figurative architectural style, and eclectic style.⁹ This research describes these styles in contrast to styles that hold universal and foundational philosophies. Such styles include neoclassical and modernism architectural styles.¹⁰ This research will highlight the structural difference between dyadic and triadic system in the language of postmodern architecture through Peircean semeiotic.

⁷ High modernism is defined by a political scientist James C. Scott as "the beliefs in scientific and technical progress that were associated with industrialization in Western and in North America from roughly 1930 until World War I." See James C. Scott, "Authoritarian High Modernism," in *Seeing Like a State: How Certain Schemes to Improve the Human Condition Have Failed The Institution for Social and Policy Studies at Yale University* (New Haven, CT: Yale University Press, 1998), 89. In architecture high modernism is roughly categorized the modernism work of 1950s and 1960s. Scott described utopian view of Corbusier's geometric city plan while Jane Jacobs' view of city is agreeable for Scott in terms of missing functionality of high modernism.

⁸ Christian Norberg-Schulz, "Michael Graves and the Language of Architecture," in *Michael Graves Building & Projects 1982-1989*, ed. Karen Vogel Nichols (New York, NY: Princeton Architecture Press, 1990), 13-14.

⁹ Regarding style specification of postmodern architecture, for example, Mark Gelernter specified as post-modern eclecticism, post-modern classicism, and post-structuralism – deconstructivist. See Mark Gelernter, *Sources of Architectural Form: A Critical History of Western Design Theory* (Manchester, UK: Manchester University Press, 1995), 227-89.

¹⁰ For example, modern architectural language was analyzed by Bruno Zevi that negates classical language system of architecture underlined assumption that language of modern architecture takes the condition of Burthes' notion of "the zero degree of writing." As opposed to classical language of architecture, "antigeometry and free form, and therefore asymmetry and anti-parallelism, are invariables of the modern language of architecture." See Bruno Zevi, *The Modern Language of Architecture*, trans. Ronald Storm and William A. Parker (Seattle, WA: University of Washington Press, 1978), 7-22.

I.2 Philosophy of Language and Theory of Architecture

This research will have three approaches toward the hypothesis. The first approach is regarding the relationship between philosophy and the fundamental characteristic of theory of architecture beyond the styles and movement (Chapter II and III). This aspect cultivates the important correspondence of oscillation between philosophy and architecture in terms of rationalism and romanticism. The second approach concerns the philosophy of language that allows us to construct a theory of architecture and the meaning of architecture (Chapter IV, V, and VI). The structural difference between Peircean semeiotic and others has to be articulated to resolve the misguided interpretation of postmodern architecture. Thirdly, this research developed a new interpretation of postmodern architecture through Peircean semeiotic (Chapter VII and VIII). As related to the first hypothesis I will describe below, the relationship between philosophy and architecture, the research approaches the fundamental cause and necessity of Peircean semeiotic for the purpose of the interpretation of postmodern architecture. The illustrated theoretical aspect – the notion of oscillation corresponds to the essential part of Peircean semeiotic – hierarchical dynamism of sign.

Architectural theories were influenced by philosophies. The key to comprehending these influences are the history of architectural styles, movements, and the theories of architecture that project a language of architecture. The history of architecture in neoclassicism, modernism, and postmodernism appeared with two axial tendencies of philosophical inclinations that can be simplified as rationalism and romanticism. Rationalism and romanticism both are forms of enlightenment and universalism. Rationalism developed the deductive form to induce purity; counter enlightenment is attached to the form of romanticism, which is dealing with emotional expression and feeling. In the history of architecture, rationalism and romanticism appeared repeatedly.¹¹ These two trends are continuously contributing to the shape of universality of architectural theory. In other words, universality requires the combination of

¹¹ Robert C Solomon, *Continental Philosophy since 1750: The Rise and Fall of the Self* (New York, NY: Oxford University Press, 1988).

rationalism and romanticism. The philosophy of existentialism and phenomenology are dominant influences for the theoretical movement of *after modernism* architecture. Norberg-Schulz's phenomenology architecture followed Heidegger's notion of Dwelling.¹² Heidegger's Existential philosophy is concerned with the notion of 'Being,' the concept of 'Dasein,' and the notion of 'Nähe (nearness or closeness).'¹³ These lines can be explained as the idea of consciousness to locality. In this research, the idea of *Locality* is not limited to physical or geographical meaning. It is associated with a mental scope that is caused by physical or perceptive interaction between human mind and external objects. These influences are emphasizing the *locality* as oppose to the universality axis of rationalism and romanticism. The idea of *locality* became more conscious than ever, and the mitigation between universality and locality was critical.¹⁴ The role of a language of architecture is expected to implement an expression of architecture under these philosophical influences. My first hypothesis is *if architecture needs to be created under the appropriate consideration of universality and locality, the key knowledge of language of architecture must be adequately articulated.* This articulation takes places in terms of its structure, applicability, and suitability. Otherwise, the architectural theory would not be appropriate for the work of architecture and the influence of philosophy. In philosophy, postmodernism deals with how to define the 'truth,' while postmodern architecture appears to be a reversal of philosophy by expressing the 'truth.' Regarding the legitimacy of knowledge Jean François Lyotard described the condition of postmodernism as "incredulity towards meta-narratives".¹⁵ He analyzed "the production of knowledge by science, as well as the discourse of everyday life, in terms of discontinuity, plurality, and parody." He argued the legitimacy

¹² Christian Norberg-Schulz, *The Concept of Dwelling – on the Way to Figurative Architecture* (New York, NY: Rizzoli International Publication Inc., 1985).

¹³ Martin Heidegger, *Being and Time*, trans. Joan Stambaugh (New York, NY: State University of New York, 2010).

¹⁴ The notion of 'critical regionalism' takes this point. See Kenneth Frampton, "Towards a Critical Regionalism," in *The Anti-Aesthetic: Essay on Postmodern Culture*, ed. Hal Foster (New York, NY: New York Press, 2002), 17-34.

¹⁵ Jean-François Lyotard, *Postmodern Condition: A Report on Knowledge*, trans. Geoff Bennington and Brian Massumi (Minneapolis, MN: University of Minnesota Press, 1984).

of “the modernist notions of justification, system, and the unity of science.”¹⁶ In the case of postmodern architecture, this expression must be implemented through a language of architecture.

I.3 Oscillation of Architectural Style and Movement

The swing phenomenon between rationalism and romanticism in the history and theory of architecture shows fundamental consideration regarding the relations to an architect’s unavoidable oscillation and shifting characteristics. At the essential level expression of architecture takes on this unstableness at some level. If architectural styles are led by social activity, its movement represents a collective tenancy of expression. The individual architect’s worldview requests the projection form a movement with agreement and conflicts. This expression consists of a hybrid frame of form expression, and an aligned mental capacity for architects. A history and theory of architecture exemplifies many architectural movement and architects oscillations (Chapter II). In the nineteenth century, this swing was between rationalism and romanticism. Classicism form inherited rationalism while classical revivalism is intrinsically romanticism. However, at the same time, revivalism had physical influence on structures, which is known as structural rationalism such as the revivalism of Gothic style structural consideration. For both sides, the philosophical influence of Enlightenment was inevitable. Enlightenment developed a rational approach of architecture while counter-enlightenment contributed to the classical revivalism. In the twentieth century, the Bauhaus movement is originated from two controversial sources: romanticism and rationalism. The Arts and Craft Movement in England was essentially the Romantic Movement in craft work and revivalism. The Werkbund movement in Germany was required for the industrial revolution of German. These two different sources developed the Bauhaus movement along with the influence of German New Objectivity and De Stijl. Rationalism influenced many modernism styles in the twentieth century. However,

¹⁶ See, Cahoon’s comment to “From the Postmodern Condition: A Report on Knowledge” Lawrence Cahoon, *From Modernism to Postmodernism an Anthology*, ed. Lawrence Cahoon (Malden, MA: Blackwell, 2003), 259.

among those termed as high modernism architects they did not simply obey rationalism. For example Mies van der Rohe developed his romantic aspect from Bruno Taut's Glass Chain. Frank Lloyd Wright's organic architecture is necessary to analyze both rationalism and romanticism reflecting on the influence of Luis Sullivan's functionalism. These two aspects in Architecture after the 1960s have been extended to the axial of universalism and localism. Postmodern architecture questioned universal application of functionalism and expression. European neo-rationalism took a more contextual and local values, while in United States romanticism pursued the expression on scenographic architecture. The oscillation between rationalism and romanticism on the axis of universalism and localism developed postmodern architectural movement along with the philosophical influence of structuralism and post-structuralism. Robert Venturi played a key role in the United States for both contextual and scenographic architecture through the concept of complexity and contradiction. This shifted paradigm continued with philosophical influences of phenomenology and post-structuralism in the late twentieth century as Postmodernism architecture and Deconstructivist architecture. The influence from philosophy is the key to develop architectural theory that is inevitably necessary to form architectural style.

The oscillation between rationalism and romanticism and shifting between universalism and localism are parallel to the influence of philosophy on architecture in the nineteenth and twentieth century (Chapter III). Both rationalism and romanticism stemmed from universalism, and the idea of enlightenment and anti-enlightenment. At the highlight on enlightenment became Kantian Idealism philosophy in Germany followed by Hegelian dialectic philosophy, and then transformed to Existential philosophy. This shifting process is the movement from rationalism towards anti-rationalism in some aspect. This aspect can be considered as objective line of thoughts and rationalism. Eventually, this aspect leads to a deterministic worldview such as the positivist view. In this thought we have outside determinants and that is a sort of linear relationship between outside influence and inside results. Anti-enlightenment is associated with more subjective emotional aspect that is the foundation of inner mind and feeling. This line of thoughts

created the indeterminism view. Outside determinants cannot be applicable and the relations between outside and inside is non-linear. Although the way of enlightenment is eventually replaced by the mode of representation that is language, the oscillation between rationalism and romanticism remained continuously. The mode of thoughts of this woven relationship between rationalism and romanticism diversified in the late nineteenth century and twentieth century along with the philosophies including phenomenology, existentialism, hermeneutics, analytic, structuralism, postmodernism, post-structuralism, and pragmatism. Modernism of architecture in a broad sense is described as rationalism. However subjective aspects of romanticism dimensions were shown in many cases such as by Mies' desire of romantic affiliation was represented as his curtain wall glazing following Taut's Glass Chain, and by Wright's notion of organic architecture was formed under his egalitarianism of Usonian. Philosophical intellectual movement toward postmodernism widely influenced the art and cultural movement including architecture since 1960s. The influence of structuralism and post-structuralism provided a critical shift for postmodern style of architecture during 1960s and 1970s in terms of mode of thinking approached from linguistics and language theory. This paradigm shift in the theoretical arena of architecture promoted a language theory of architecture from Ferdinand Saussure (semiology) was supposed to include the semeiotic theory of Charles Sanders Peirce (semeiotic). But this intention was a limited version of application to language of architecture.

Surely philosophy of language made great contributions to the theory of architecture. But this origin of influence was not thoroughly appropriated by theorists of architecture. One of the reasons must be accessibility to Peircean theory due to the limitation of Peircean theories' publication at the time, and the complexity of philosophy of Charles Sanders Peirce. I claim that Peirce's triadic language system was not comprehended both by the linguistics theorists and architectural theorists. I propose one of the important aspects is the idea of oscillation that allows us to understand the shifting process between modes within Peircean triadic theory. The idea of oscillation inherits its characteristics as we can see through enlightenment to high modernism in

architecture. Through oscillation postmodern philosophy and pragmatism shared a role and aligned each other, because both philosophies negate determinism and seeking through other than foundationalism. Under this influence postmodern architecture intended to find the way of expression. This expression was realized as postmodern architectural language. The phenomenon of oscillation between universality and locality was also developed under the influence of phenomenology and existential philosophy such as Edmond Husserl and Martin Heidegger. The primal theory underlined is the notion of *Being* which is led by Heidegger's concept of *Dasein*. This monadic philosophy triggered architectural theorists, Norberg-Schulz (*Intentions, psychology, and perception of architecture*) and Kenneth Frampton (*Critical regionalism architecture*) for the inauguration of phenomenology architecture. From Peircean view this mode is also aligned especially with monadic mode of being, and is the byproduct of psychology and existentialism. The dimension of oscillation is relevant to subjective mind that seeks the relation of objective knowledge of architecture. Architecture as a sign is an image that is unavoidable mental aspect of architecture, and it is the creative process of architecture that involves inner mind and outer object. Psychologist Jean Piaget, for instance was one of the influential intellectuals. Peircean dyadic mode, secondness is aligned with the mode of psychology and dynamic process of Peircean notion of dynamic interpretant. The alignment of pragmatism with postmodernism, existentialism, and psychology is a vital source of oscillation that creates architecture without being tolerated by inflexible expression of work of architecture, and architectural spatial concept exceeded Euclid system of space. Psychological aspect such as Rudolf Arnheim focused on terms of human perception, and how architecture related to mind and symbol. Therefore, I need to analyze the system of oscillation which is reflection of mind and symbolic object. The major approach for this is the understanding of Peircean philosophy and its application to architecture.

I.4 Language Theory between Postmodernism and Pragmatism

Postmodern philosophy contributed to the seeking of knowledge, while postmodern architecture is the expression through this knowledge. The parallel connection between postmodern philosophy and Peircean philosophy, pragmatism philosophy has been discoursed in terms of their role and characteristics (Chapter IV). For instance, a discussion on how pragmatism appropriates postmodernism resource. Both for pragmatism and postmodernism in philosophy, therefore it is necessary to analyze the key aligning philosophy, postmodern philosophies in order to project onto Peircean philosophy and an interpretation of postmodern architecture through it. The movement of continental philosophy from idealism to existentialism and phenomenology developed thoughts that regard a meaning of facts beyond mere facts.

In parallel to this line of thought, French structuralism became an influential movement in the 1960s (Chapter IV). Structuralism influenced existentialism and phenomenology. On the system of structuralism, the truth of knowledge is determined by structure rather than the subjective mind. Structure is coded as cultural sign that is language. The value of individuality and subjectivity is faded out within this mode of thinking, which can be seen in logical positivist and analytic linguistics. In these modes, the determinants exist outside of a system and context. The oscillation of subjectivity and objectivity triggered the emergency of post-structuralism that questions the determinants of outsider and holds strong doubt regarding the normative knowledge of truth. The uncertainty of knowledge was in question on the frame of post-structuralism. The influence from Nietzsche to Foucault, Deleuze, and Derrida promulgated a way to comprehend a truth in postmodern philosophy in terms of the idea of genealogy, difference, and eternal return, while analytic linguistics of Wittgenstein used by Lyotard further to investigate the legitimacy of various forms of knowledge. Normative knowledge and grand-narrative of knowledge were deeply questioned by him. Philosophy of postmodernism holds the indecisiveness and plurality of truth which may be characterized by the notion of simulacrum that has been an insight of Baudrillard which is concerned hyperreality. This reality shares the approach in rhetoric and aesthetic with literature, art, and

architecture. The expression of architecture took this mode of reality in order to deform, deconstruct architectural language. The influence on postmodernism in architecture through structuralism and post-structuralism essentially was formatted by the adaptation of Saussurean semiology format in order to explain architectural language since 1960s. The approach from semiology regardless of structural or post-structural format was populated in the arena of architectural language theory. The pitfall of this adaptation was not clearly investigated among theorists of architecture.

The comparison between semiology and semeiotic allows us to discern the essential problem in terms of language theory in architecture. A theoretical approach to a language of architecture from *semiology* is inflexible and has limited ability for the understanding of postmodern style architecture (Chapter V). If the meaning of architecture is derived from a sign vehicle system of architecture, architecture conveys the meaning that is expressed by the objects within the system of architecture. In this sense, the meaning of architecture is corresponding to the formal system of architecture. Sign vehicle was explained in the work of Charles Morris' sign theory. He proclaimed that his theory of sign is developed from the Charles Sanders Peirce's Semeiotic theory. However, I question whether his theory is truly engaged in Peircean theory.¹⁷ Between modernism and postmodernism in architecture we experienced a decisive change in the relationship between meaning and formal system in postmodern architecture. This relationship was linear before postmodernism (e.g. neoclassical style through modernism style in architecture) and was non-linear at the time of postmodern in the simplified formation. The shift from linear modernism to non-linear postmodernism in philosophy influenced architecture. "Positivist was only one of a few wide variety of philosophical movements of the first half of the twentieth century," and doubted by "subsequent philosophers of language, logic, and science."¹⁸ Also, quantum theory forced us to abandon determinism. Postmodern architecture was characterized as complexity and

¹⁷ Charles W Morris, "Foundations of the Theory of Signs," in *International Encyclopedia of United Science* (1953), 3-4.

¹⁸ See, Cahoon, *From Modernism to Postmodernism an Anthology*, 5.

contradiction, pluralistic and indecisive.¹⁹ The theorist of architecture drew this exposition of architectural style by following Ferdinand Saussure's semiology.²⁰ This logic is based on the relation of the signifier and the signified two entities relationship which is an analogy of concept (meaning) and sound (object) in semiology as opposed to Peircean triadic which consists of the relations of more than three entities. Charles Sanders Peirce's sign theory categorized three entities. His notion of 'Firstness, Secondness, and Thirdness' are categorized in the mode of being as monadic (single), dyadic (two things relation), and triadic (more than three things relations such as pattern).²¹ Object represents sign vehicle, while concept underpins architectural meaning. However, this dyadic structure – meaning and form relation in architecture inevitably possesses the arbitral relations of them that post-structuralism intended to explain. Post-structuralist view is that structure itself cannot define meaning rather it is relied on such as existing context and system. Therefore, defined meaning will be arbitrary. Roland Barthes' renouncement is that "there is no underlying systems to reveal" for the ground.²² In philosophy of language, opposing to Saussurean dyadic semiology Peircean triadic approach was emphasized for the critique of deconstruction and post-structuralism philosophy by San Juan E. Jr.²³ *I am hypothesizing that this dyadic structure of language of architecture is not a truthful explanation of postmodern architecture.*

By comparing the essential differences of language theory between Saussure and Peirce, a possible language of postmodern architecture can be distinguished. Regarding the

¹⁹ Venturi's notion of 'complexity and contradiction' triggered new paradigm of pluralistic architectural meaning. See Robert Venturi, *Complexity and Contradiction in Architecture* (New York, NY: The Museum of Modern Art, 2002 (1966)).

²⁰ Ferdinand de Saussure, *Course in General Linguistics*, trans. Wade Baskin (New York, NY: McGraw Hill, 1966).

²¹ See Charles Sanders Peirce, *Collected Papers of Charles Sanders Peirce* (Cambridge, MA: Harvard University Press, 1931).

²² See William L Reese, in *Dictionary of Philosophy and Religion* (New Jersey, NJ: Humanity Press, 1996), s.v. "Post-Structuralism."

²³ See San E. Jr. Juan, "Signs, Meaning, Interpretation: C. S. Peirce's Critique of Deconstruction and Post-Structuralism," *Kritika Kultura* 8(2007): 57-79. Accessed September 29, 2013, <http://kritikakultura.ateneo.net/issue/no-8/signs-meaning-interpretation>. Juan described the difference between Saussure and Peirce in terms of dynamic process of semiosis.

relationship between meaning and the architectural formal system, a language of architecture is taking place where the common value (meaningfulness) must be shared by society. Although, the determination of this shared value is not simply achieved with the correspondences of a dyadic relationship of semiology, qualified architecture expresses the decisive meaning of architecture. Thus, there is a possible way to determine the meaning of architecture. To obtain meaning or information there are many approaches. For example, in the information theory, Claude E. Shannon defines meaning as information can be obtained by reducing the uncertainty based on entropy theory,²⁴ while postmodernism philosophy concerns the narrative form of knowledge. It appears that these are oppositions in terms of process to obtain truthful information. Neo-Kantian philosophy approaches a symbolic meaning of art through the signification of art form that takes non-discursive symbol mode. For example, S. K. Langer explained a complex signification of art as “language of feeling” with the notion of the “projection of feeling” as she described: “feeling is projected in art as quality.”²⁵ In Peirce the monadic mode is associated with “feeling” and “quality.” These are ephemeral and possibility mode that postmodernism architecture was seeking as a way of expression under the name of *icon*.

A history of postmodernism in architecture was clearly promulgated by theorist and architect in the United States Robert Venturi with his critical notion of “complexity and contradiction.” In Europe a neo-rationalist Italian theorist Aldo Rossi took this role with his notion of locus that unifies architecture with *event* and *process* as new meaning of functionality in architecture that synchronizes the concept of new history that combine *event* and *memory*. Venturi’s vision influenced successive architects and theorists of postmodern historicism, contextualism, and deconstructivist style of architecture. Neo-rationalist theory was also sensitive with the contextual environment of architecture. Their influence can be seen on some of deconstructivist style of architecture aligning

²⁴ For information theory, see Claude E. Shannon, "The Mathematical Theory of Communication," *The Bell System Technical Journal* 27, no. July, October (1948): 379-423, 632-56.

²⁵ Susanne K Langer, *Mind: An Essay on Human Feeling*, vol. 1 (Baltimore, MA: The Johns Hopkins Press, 1967), 73-106.

architectural autonomous with linguistics theory and phenomenology architecture. Charles Jencks and other theorists populated scenographic postmodern language of architecture which is brought from structural linguistics that is Saussure origin semiology, while Frampton disseminated contextual postmodern architecture with his theory, critical regionalism in conjunction with Norberg-Schulz reflecting Heidegger's Existentialism. The criticism of scenographic postmodern attacked the characteristics of scenographic postmodernism as eclectic, immoral, and valueless commodity other than commercialism. These criticism divided Venturi's theoretical consistency between visual complexity and contextual inclusiveness of postmodern architecture. Then, we lost the real language of postmodern architecture. Postmodern architecture became shallow and ethically problematic. Essentially the meaning of postmodern architecture was decomposed as the piecemeal. The fundamental problem is how to understand a language of architecture of postmodern architecture. Postmodern architecture theorists and their background theories including Saussurean semiology, the interpretation of Peircean semeiotic such as Charles Morris and Umberto Eco have to be questioned in order to clarify the real language theory for postmodern architecture. Underlined problems are misunderstanding of Peircean semeiotic for both disciplines, in architectural theory and philosophy of language. They defined or understood a limited vision of Peircean semeiotic that disguise the essential meaning of triadic theory of Charles Sanders Peirce. We must take an appropriate method for a language of architecture.

I.5 Approaching Language of Architecture via Peirce

Peircean semeiotic influenced philosophy of language. Architectural language theory can be understood as its ramification that contributed to the formalization of architectural theory. The point I am focusing on is that Peircean semeiotic was introduced to the arena of architectural language theory in a narrowly defined manner. One of the reasons that can be discerned is the accessibility to Peirce's manuscript at the time, and the other is partly caused by the intricate Peircean triadic theory itself. At the

essential level the demarcation of basic structure between dyadic and triadic language theory is in question. Peircean triadic theory is explained along with his theory of metaphysic, universal view that constitutes the mode of being of triad. The mode of being of thirdness has to be implementing all relations as triadic mode (more than three-thing relations). His theory of mode of being is categorized by three – including firstness, secondness, and thirdness. The firstness is the mode of monadic that can be represented as possibility and feeling. There can be no comparison in this mode, thus it creates unification and oneness. The secondness is the mode of dyadic that can be actuality and conflict. This mode can be understood as man-made rule and comparative value system. And, the thirdness is the mode of triadic that can be the final stage mode, which can be the conformity of firstness and secondness mode, and can be seen as law and truth. Within these modes, Peirce established his universal view that consists of three entities including *sign*, *object*, and *interpretant*. His logic of relativity formalizes this view with the relation of these three as his sign theory, semeiotic. The generation of meaning in his semeiotic is constructed hierarchy of this system that construct relations with recursive and ephemeral manner. The notion of *stand for* is the original causality of meaning creation that composes relations as adicity in his logic.

My approach to a language of architecture is through semeiotic by articulating the difference of mode of being in *semeiotic* from that of semiology. *I hypothesize that the approach to a language of architecture via Charles Sanders Peirce's semeiotic theory will provide a truer method in order to define postmodern architecture.* Architectural theorists did not complete the necessary comparison between semiology and semeiotic regarding the application to a language of architecture and their basic structure – dyadic versus triadic.²⁶ Charles Morris and Umberto Eco both were influenced by Peircean semeiotic theory. However, their theoretical structure is dyadic at the essential level. Morris approached from his behaviorist theory while Eco followed Morris and

²⁶ Regarding Saussure's sign system structure, see Ubaldo Stecconi, "Addendum to 'Signs, Meaning, Interpretation: C. S. Peirce's Critique of Deconstruction and Post-Structuralism,'" *Kritika Kultura* 8(2007): 80. Accessed September 29, 2013, <http://kritikakultura.ateneo.net/images/pdf/kk8/adendum.pdf>.

emphasized the functional aspect of his sign theory with dyadic structure consisting expression and context. While difficulty exists to distinguish between dyadic and triadic sign in philosophy of language, it is said that “Peirce focused on sign interpretation” and “Saussure focused on the structural aspects of sign system.”²⁷ Peircean *semeiotic theory*’s main concern is not limited to ‘interpretation.’ I will focus on this discrepancy in order to pursue recapturing the meaning of architecture and the value of postmodern architecture. Furthermore, this recapturing of postmodern architecture will determine the influence of American Pragmatism philosophy on the theory of architecture by a mechanism that allows us to *shift* our conception and reality between universality and locality. Then, a language of architecture can express the meaning of architecture with the appropriate consideration of universality and locality. The concept of *shift* is developed in light of Peirce’s notion of *dynamic interpretant*. Peircean interpretant is further divided into three categories, which are paralleled to three modes of category. Interpretant consists of *immediate interpretant*, *dynamic interpretant*, and *final interpretant*.²⁸ The difference between them is associated with the modes of being which is capable to shift in a context. This research will explore this *shift* concept as a key to understanding the theory of postmodern architecture in scenographic architecture and contextual architecture both. This concept will examine the theoretical models that will be described in the methodology for the interpretation of Peircean postmodern architecture.

Peirce established his semantic logic in his *Reduction Thesis*.²⁹ I will approach his logic through Peircean Algebraic Logic (PAL).³⁰ Robert W. Burch theorized his logic as PAL

²⁷ Ibid.

²⁸ Peirce, *Collected Papers of Charles Sanders Peirce*. (CP. 8.315). In the letter to William James Peirce explained: “Dynamical Interpretant is whatever interpretation any mind actually makes of sign,” “The Final Interpretant does not consist in the way in which any mind does act but in the way in which every mind would act,” and “The Immediate Interpretant consists in the Quality of the Impression that a sign is fit to produce, not to any actual reaction.” This categorical changing of interpretant is the key to understand the concept of shift in this research.

²⁹ Robert W. Burch, "Charles Sanders Peirce," in *The Stanford Encyclopedia of Philosophy*, ed. Edward N Zalta (Summer 2013 Edition). Accessed September 29, 2013, <http://plato.stanford.edu/entries/peirce/>. Burch described Peirce’s so called Reduction Thesis holds the thesis: “all elations ... may be constructed

by means of *the first order of quantificational logic* (Chapter VI). His proof provided the analytical approach to Peircean logical model in order to uncover the semantic structure of Peircean language theory. This structure consists of *depiction*, *representation*, and *expression*.³¹ The argument of language philosophy regarding sign theory whether dyadic or triadic has been a subject for long period. One of the crucial issues can be how to understand the notion of “stand for,” because it leads us to the problem of representation and signification. The meaning of “stand for” is applicable for both dyadic and triadic.³² From that stance, essentially language structure is not limited to dyadic Saussurean semiology. It is fundamentally triadic relations that include dyadic relations intrinsically. The notion of *adicity* complies with this meaning of “stand for” in Peircean Reduction. This reduction also is not that of the normal reduction theory of positivist view. The idea of adicity is a relation that creates meaning. As opposed to Saussurean dyadic, signifier–signified relation, Peircean relation is formulated with triadic relations. In Peircean triadic relation is not limited only three things relation. It is rather multiple relations of things. Peircean reduction is also desired to be implemented in the triadic mode being, thirdness. In the PAL, relations are generated through the notion of “*hypostatic abstraction*” with three identity modes including monadic relation, dyadic relation, and triadic identity. Peirce metaphysics requires thirdness mode of de-generate identity of triadic, called *teridentity*. The dimension of Peircean semantic and hypostatic abstraction formulates two levels. Formal structure of relation is *extensional* level while mental structure of that is *intensional*. I will apply these two levels of semantics and hypostatic abstraction to analyze anticipating interpretation of architectural language.

The fundamental concept of shifting was described above in many aspects. Peircean postmodern architecture is the explanation of this concept based on Peircean logic,

from triadic relations alone, whereas monadic and dyadic relations alone are not sufficient to allow the construction of even a single ‘non-degenerated’ ... triadic relation.”

³⁰ *Peirce's Reduction Thesis: The Foundation of Topological Logic* (Lubbock, TX: Texas Tech University Press, 1991).

³¹ *Ibid.*, 27-51.

³² Nöth, *Handbook of Semiotics*, 86.

semeiotic, and his philosophy. Three levels of semantics including *depiction*, *representation*, and *expression* are relevant to the level of interpretation which conducts main structure by means of term itself, combination of unified terms, and a meaning construction by means of totalized system in Peircean architectural language. *Depiction* is associated with the principle of terms allocation. Interpretation system is readily utilized as designate sequence of terms. *Representation* is relevant to the idea of language vocabulary which is formed as units. And, *expression* is totalized interpretation that makes meaning of architecture. These three levels of semantics consist of layers of hierarchy which changes level dynamically through the act of *interpretant*. In Peircean semeiotic interpretant is the key entity that creates cyclical relations of signification system. Peirce categorized interpretant into three stages that includes *immediate interpretant*, *dynamic interpretant*, and *final interpretant*. These three are cyclically making new relations between sign and object, and sign and interpretant that are triadic relations. Peircean logic provided *hypostatic abstraction* as the system of meaning clarification, Peircean reduction through the relations of identities. These identities are formed with *monadic*, *dyadic* and *triadic identity*. Among those especially the role of triadic identity called *teridentity* is important and must be related to the mode of being of thirdness in Peircean semeiotic. The linkage of identities is the key to make meaning clear. But, because of thirdness mode involvement this process requires shifting and oscillating dynamism. This level *shifting* is caused by hypostatic abstraction which invites new entities to satisfy the abstraction process. This process can be conceptualized as the role of interpretant. *The process of oscillation and shifting was attempted to explain Saussurean dyadic mode, but it was not sufficient.* For example, John Shannon Hendrix provided his analysis of psychoanalytic approach based on Saussurean dyadic, signifier–signified relation utilized among the post-structuralist architects and theorist.³³ I will discuss their theory projected on the triadic mode in Peirce and utilize them in order to clarify the system of Peircean way of shifting mode. The approach from aesthetic judgment thorough theory of *survival aesthetic* is explained

³³ John Shannon Hendrix, *Architecture and Psychoanalysis: Peter Eisenman and Jacques Lacan* (New York, NY: Peter Lang Publishing, 2008 (2006)).

by the shifting process of *refuge and prospect*.³⁴ This shifting is the origin of generation of architectural pleasure. Theoretical approach from *hedonic psychology*³⁵ can be the source to support an approach to the relations between survival aesthetic and shifting mode. Peirce described in his notion regarding *secondness* mode due to the matter of psychology. This dyadic mode of shifting will be extended to triadic mode of shifting through notion of *hypostatic abstraction* and three levels of semantics in Peircean interpretation.

I.6 Architectural Formal System and Peircean Theory

With the connection to the formal system of architecture, I take an analogical approach between classical formal system and Peircean Algebraic Logic (PAL) (Chapter VII and VIII). While classical formal system provides us a static relation of formal structure of architecture, PAL logic conceptualizes extension of this formal system to a more generalized application for architectural form beyond classical style. Vitruvian classical formal system was explored by Alexander Tzonis and Liane Lefaivre as three level of architectural formal syntax; these are (1) *taxis*, (2) *genera*, and (3) *symmetry*. In Peircean interpretation, I approach these three systems with corresponding three levels of Peircean semantic logic including *depiction*, *representation*, and *expression*. Whole system of Peircean interpretation is involved with Peirce's philosophy of metaphysics and the mode of thirdness. This leads us architecture is not mere formal system of sign objects. The interpretation must be involved with worldviews and interaction between these views and formal meaning with triadic way through the method of Peircean reduction and thirdness metaphysics. Dyadic psychology needs to be extended to the view of thirdness. To conduct this aim I focus on the role of tripartition and interpretant. While the role of tripartition penetrates all level of formal system in classic architectural style, the role of interpretant is the source of metaphysical construction of architectural

³⁴ Grant Hildebrand, *Origin of Architectural Pleasure* (Berkeley, CA: University of California Press, 1999).

³⁵ Daniel Kahneman, Ed Diener, and Norbert Schwarz, *Well Being: The Foundation of Hedonic Psychology*, ed. Daniel Kahneman, Ed Diener, and Norbert Schwarz (New York, NY: Russell Sage Foundation, 1999).

language. The transformation of postmodern architectural *form* provides the profile that is projected on this analogical analysis. The alignment of Peircean philosophy and pragmatism to the postmodern architecture is the theoretical underpinning to understand the real meaningfulness of postmodern architecture and the interpretation postmodern architecture. The dyadic level oscillation then becomes triadic meaning creation along with Peircean reduction.

By analyzing the PAL and comparing with classical formal system of architecture I develop a more technical model (Chapter VIII) extended from Peircean Postmodern Architecture (Chapter VII) to apply case studies based on simplified model of PAL semantics and hypostatic abstraction. PAL specifies *extensional semantics* and *intensional semantics* with three levels of interpretation including *depiction*, *representation*, and *expression*. The classical form of architecture consists of three levels of syntax including *taxis*, *genera*, and *symmetry*. The model determines the analogy of this syntactical level to PAL system with two phases. First phase is that of formal system associated with PAL extensional semantics. The second phase is that of mental interaction between worldview and architectural formal system along with intensional semantics of PAL. *The first proposition is that there is an extensional semantics which includes (1) taxis, (2) genera, and (3) symmetry. The second proposition is that there is an intensional semantics which includes (1) depiction, (2) representation, and (3) expression.* In the extensional level taxis plays the role of formal guide and depicts the sequence of the allocation based on the rule of tripartition. The role of genera is to form units and typologies of architectural terms and elements which are filled under the rule of tripartition. The third level of symmetry expresses a whole set of relations under the two schemas, *rhythm* and *rhetoric*. This level produces a formal level interaction at the whole system level. For the intensional level of interpretation the relation to the possible world domain is emphasized in order to clarify Peircean triadic semantics. The conception of a *possible world* configures the architectural meaning beyond mere formal system of architecture which can be seen as extensional level. At this level, the concept of interpretant and oscillation are adopted

for the sake of theoretical development. The first interpretation deals with the sequence of relations of architectural elements involving mental activity of immediacy. The second interpretation is associated with the representational cultural elements involving mental activity and experience. The third level of interpretation the meaning of architecture expresses the critical mental interaction with the formal system in order to generate meaningfulness of architecture. At this level, the system of interpretation must take a process of hypostatic abstraction. This level requires more contextual involvement beyond representational form which can be seen as a scenographic postmodern architectural style. For example, Venturi's notion of "*complexity and contradiction*" and the notion of *critical regionalism* exemplify this way of expression. *The third proposition is that a language of architecture is a unification of extensional semantics and intensional semantics.* With the aid of the notion of hypostatic abstraction this unification can lead the meaning clarification of architecture. The process of hypostatic abstraction requires the linkage of identities and Peircean metaphysics, thirdness mode with the possible existence of non-degenerate relations. This process allows the autonomous of architectural form be relevant to the existence of non-degenerate relation while identities of monadic, dyadic, triadic can be used for the reduction process by inviting new entities which are a new interpretant. I took analogical way between the language of Peircean algebraic logic and a language of architecture. The notion of identity between Peirce and architecture follows the same stance. The formulation of hypostatic abstraction is cyclical because of thirdness mode and interpretant involvement, and it is controversial reduction in Peircean way. *My last proposition is that Peircean semantics can signify the characteristics of postmodern architecture under the aid of hypostatic abstraction.* The characteristics of meaning plurality, complexity, and contradiction of postmodernism can be traced by this Peircean mode of interpretation. The thirdness mode involvement to this interpretation allows us to shifts identity between monadic, dyadic, and triadic, while the non-degenerate identities are possibly explained at the formal system level; *monadic architectural identity is origin and lawful guidance of architecture* such as taxis and tripartition;

dyadic architectural identity is *architectural hierarchical units* such as genera and typology; and *triadic architectural identity* called *teridentity* is *architectural configuration* such as symmetrical formal expression. I take this model setting for the analysis of postmodern scenographic architecture and postmodern contextual architecture in order to prove Peircean interpretation of Postmodern Architecture.

I.7 Scope of Dissertation and Hypotheses

The origin of postmodern architecture varies from the Mannerist, Baroque, and Rococo Period in anti-modern treatise³⁶ to the termination of modernism style in the 1970s.³⁷ While Venturi preferred the visual complexities and contradiction from a Mannerist, Baroque, and Rococo Periods as the influence on his anti-modern treatise, Jencks defined postmodernism that showed “the broader cultural and intellectual meaning” and he symbolized the death of modernism as the demolition of a modern style building. This parallels the shift from Modern Period to that of Postmodern, and the issue of the continuation and discontinuation between modern and postmodern. Klotz declared the birth of postmodernism as “primary a designation of a break of continuity, pointing the fact that the tradition of the Modern Movement in architecture has ceased to be a continuum.” He argued that postmodern is the revision of modernism.³⁸ This history of architecture shows Neo-classism of architecture is the reaction of Mannerist, Baroque, and Rococo Periods to conform the universal modernism in nineteenth and twentieth century. Therefore, the scope of this dissertation is (1) history and theory in architecture nineteenth through twentieth century, (2) influence of philosophy on architecture nineteenth century through twentieth century, (3) postmodern architecture interpreted since the 1960s, (4) Saussurean frame of postmodern architecture, (5) Peircean frame and semantic logic, and (6) Peircean interpretation of a language of architecture. The main axis of this scope for the history and theory of architecture, and the relationship

³⁶ Venturi, *Complexity and Contradiction in Architecture*.

³⁷ Charles Jencks, *New Paradigm in Architecture: The Language of Post-Modernism* (New York, NY: Yale University Press, 2002), 9. Jencks defined the death of modernism “on July 15, 1972 at 3:32 p.m.”

³⁸ Heinrich Klotz, *The History of Postmodern Architecture*, trans. Radka Donnell (Cambridge, MA: MIT Press, 1988), 3-5.

between philosophy and architecture will be through rationalism versus romanticism, and universalism versus localism along with the three hypotheses described:

If architecture needs to be created under the appropriate consideration of universality and locality, the key knowledge of language of architecture must be adequately articulated.

The dyadic structure of language of architecture is not a truthful explanation of postmodern architecture.

The approach to a language of architecture via Charles Sanders Peirce's semeiotic theory will provide a truer method in order to define postmodern architecture.

The demarcation of Semiology (Saussure) and Semeiotic (Peirce) is the essential starting point for the interpretation of current postmodern architecture. The Saussurean frame and Peircean frame serve as the proof of *hypotheses regarding the limitation of Semiology and the plausibility of the approach from Peircean Semeiotic*. Furthermore, I will explore the foundation for understanding the philosophical influence of Peirce on postmodern architecture.

CHAPTER II

HISTORY AND THEORY IN ARCHITECTURE 19TH THROUGH 20TH CENTURY

II.1 Introduction

As Venturi shows in this treatise of “*Complexity and Contradiction*,” the range that affects the origin of postmodern architecture varied from (a) the sixteenth century Mannerism, Baroque, and Rococo period’s style with *anti-classic* expression³⁹ through the 1960s architectural movement toward anti-modernism; (b) along with philosophical movement of Structuralism and Post-structuralism; and (c) the termination of modernism style in the 1970s following Jencks’ definition.⁴⁰ The suitable range is set for a precursor of postmodern architecture for this research purpose as it relates to the influence from philosophy. In the field of philosophy, the eighteenth century was the major turning point to diversify Kantian Idealism to Existentialism, Phenomenology, Positivism, Marxism, and Postmodernism. Therefore, in the nineteenth century the influence of philosophy on architecture had a significant intensity towards modernism in architecture. An assumption of the range in order to understand the postmodern architecture (1960s-1980s) can plausibly be set as since nineteenth century. I will review the architectural theory movement and the history of architecture from the nineteenth through the twentieth century by emphasizing the aspect of oscillation between rationalism and that of romanticism in architecture.

II.2 Neoclassicism and Revivalism

The dominant architectural style in nineteenth century Europe was neoclassical style represented by the bourgeois class and Revivalism in France. Neoclassicism inherited the influence of French Beaux-Arts architecture and exhibited idealism expressed as

³⁹ Venturi, *Complexity and Contradiction in Architecture*.

⁴⁰ Jencks, *New Paradigm in Architecture: The Language of Post-Modernism*.

timeless form of Classicism.⁴¹ In the nineteenth century, the dominant architectural style—neoclassical style—and theoretical movement toward Revivalism was influenced by the birth of a new class, the bourgeois in France. The neoclassicism held an inheritance of French Beaux-Arts and neo-platonic idealism in Classical form that was considered the eternal form of beauty.

Neoclassicism yielded Structural Rationalism, Art Nouveau Style, and Classical Rationalism. Structural Rationalism has two aspects that were propagated as the primitive theory of modernist mind which stems from classical rationalism, and the momentum of influence on Art Nouveau Style, which had a tendency towards expressive style. French architect Viollet-le-Duc (1814-1879) was an early influential theorist in modern architecture. His inclination was to deal with specific materials along with his research of ancient Greek and Gothic architecture. He kept distance from the movement of Art Nouveau and his theoretical ideal was to remain as an architectural materialist, and invited Gothic Revival movement. Viollet-le-Duc's rationality can be seen from his "belief that logical construction is the essence of good architecture."⁴² One of the stems of the functionalism in architecture came from his rationalism. His successors were classical rationalist such as Auguste Perret (1874-1954) and Auguste Choisy (1841-1904⁴³). Choisy was strongly influenced by rationalism philosophers in the 18th century. He founded the rationalism on his modular coordination. His role was "the starting-point for Le Corbusier's 'modulor', which is explicitly based on Choisy."⁴⁴ However, Krufft explained that "Viollet-le-Duc's complex view of history, combined with what was ultimately a Romantic conception of architecture, was carried to greater lengths"⁴⁵ Technological aspects of architecture were combined with expression of

⁴¹ With the association of term 'style,' Classicism was considered to be a "timeless language of architecture." See Gelernter, *Sources of Architectural Form: A Critical History of Western Design Theory*, 164.

⁴² Harry Francis Mallgrave, *Modern Architectural Theory: A Historical Survey, 1673-1968* (New York, NY: Cambridge University Press, 2005), 130.

⁴³ Auguste Choisy's birth and death is according to the Mallgrave. See *ibid.*

⁴⁴ Hanno-Walter Krufft, *A History of Architectural Theory from Vitruvius to the Present*, trans. Roland Taylor and Anthony Wood (New York, NY: Princeton Architectural Press, 1994), 287.

⁴⁵ *Ibid.*

architecture that follows cultural and artistic aspiration. He showed his oscillation between rationalism and romanticism considerations of prehistoric art, which is the origin of all other art.⁴⁶

The way of architectural expression must be gasped by the element of structure for this theory. In the movement of Art Nouveau Style, the architects of influence are Antonio Gaudi (1852-1926), Victor Horta (1861-1947), Hector Guimard (1867-1942), and Hendrik Petrus Berlage (1853-1934). Philosophical inclination for the development of Art Nouveau was counter-enlightenment against classicism of Beaux-Arts. Through Victor Horta's introduction of Nouveau in U.S., Art Deco was developed by the modification of Art Nouveau along with the re-evaluation of Beaux-Arts combined with other influences such as Cubism, Expressionism, and Futurism after World War I. In Europe, Berlage inspired De Stijl, Amsterdam School, and New Objectivism in Germany. Art Nouveau is characterized "as the style 1900 ... expresses an essentially decorative trend."⁴⁷ This trend "gives rise to two dimensional, slender, sinuous, undulating and invariably asymmetrical forms."⁴⁸ The Art Nouveau inherited the original influence from the rationalistic architectural structuralism, but the individual form with romanticism was realized by the expression of Art Nouveau. This way of expression widely spread around the 1900s.

II.3 Arts and Crafts Movement and Bauhaus

Turning from the nineteenth into twentieth century, the two major movements outside of France were critical for the formulation of modernism of architecture. They are the Arts and Craft movement in England and the Werkbund movement towards Bauhaus in Germany along with the influence of German New Objectivity, and De Stijl. Aligned with the rationalism and universalism axis, Classical Rationalism and Rational

⁴⁶ Ibid. Krufft explained Viollet-le-Duc's romanticism aspect following his statement on prehistoric architecture. "In all cultures are will confront the same options and obey the same laws: prehistoric art seems to contain within it the seeds of all other art."

⁴⁷ Robert L. Delevoy and Barry Bergdoll, "Art Nouveau," in *Encyclopedia of 20th-Century Architecture*, ed. Vittorio Magnago Lampugnani (New York, NY: Thames and Hudson, 1986), 19.

⁴⁸ Ibid.

Structuralism are influenced by rationalistic Enlightenment while romanticism developed Romantic Classicism in Germany such as Schinkel and the Arts and Craft Movement in England. For the romanticism account of the time, the idea of counter enlightenment developed Art Nouveau and Vernacularism such as the organic forms of Gaudi. The German industrial development entailed rationalism such as in Werkbund. On the axis of universalism, the rationality of Bauhaus was established especially in Dessau Bauhaus while Spinoza influenced the De Stijl movement.⁴⁹ The rationalism side Bauhaus and that of romanticism should be paralleled for an example of architectural history in terms of oscillation.

In England the Gothic revivalism thorough the Arts and Craft movement influenced many architects and successive architectural theorists. Major contributors to this movement were: A.W.N. Pugin (1812-1852), John Ruskin (1819-1900), and William Morris (1834-1896). The movement was associated with socialism philosophers such as Thomas Carlyle (1795-1881) against a materialistic worldview as a Calvinist. Along with Gothic revivalism his philosophy influenced Ruskin's idea of craftsmanship with originated from Pre-Raphaelite view. Morris' firm and his activity were strongly influenced by Ruskin's view. Especially, his philosophy can be seen in his writing, "*The Seven Lamps of Architecture*"⁵⁰ which questioned the ideal of architecture with the value of craftsmanship and aesthetics concerning daily life style at that time in England. Ruskin's ideals and principle of architecture were derived from nature, and it was not originated from the view of renaissance classicism view. Morris was associated with the Pre-Raphaelite craft work, and eventually his situation guided the connection of craftsmanship view of daily life, and a socialism view. His inclination toward Gothic revival is realized as his furniture design in his house called 'Red House.' The connection to Pre-Raphaelite taste in England can be said to have originated with Antiquity in previous century. In the nineteenth century in England, Greek revivalist

⁴⁹ Kenneth Frampton, *Modern Architecture: A Critical History* (New York, NY: Thames and Hudson, 1992), 142. According to Frampton, De Stijl was "influenced as much by the philosophical thought of Spinoza as by the Dutch Calvinistic background from which they all came."

⁵⁰ John Ruskin, *The Seven Lamps of Architecture* (New York, NY: Dutton & Co inc., 1956).

Thomas Hope (1769-1831) had “rationally-based eclecticism,”⁵¹ and William Morris had Romanticism. But, they came from the same origin, Antiquity. Philosopher Richard Norman Shaw (1831-1912) was influenced by Ruskin, and Shaw’s activity provided a linkage between the Arts and Crafts movement and Ebenezer Howard’s (1850-1928) Garden City movement by the end of the nineteenth century. Through English architect Arthur Mackmurdo (1851-1942), the Arts and Crafts movement influenced Art Nouveau. In the United States, the Arts and Crafts movement influenced a wide range of architectural movements in modern era such as Prairie School in Chicago and the work of Frank Lloyd Wright.

The development of Bauhaus (1919-1932) illustrates the oscillation and shift from Werkbund with a mixture of Arts and Craft movement, then, it shifted to a craftsman universalism. Finally, this movement was explored as high modernism architecture such as works of Mies van der Rohe (1886-1969). The work of craftsmanship and the relations to design was focused on in Bauhaus. There are two aspects. One side of the aspects can be seen through Henry van de Velde (1863-1957) an influence from Morris’ Arts and Crafts movement. Van de Velde’s philosophy was formed after Friedrich Nietzsche’s complexity in creative mind. Nietzsche’s controversial philosophy of rationality and irrationality are represented by the notion of ‘will to form.’ Human creativity is possible by ‘will to form.’ “as the quasi-mystical projection of the creative ego into the art object.”⁵² Wilhelm Worringer’s (1881-1965) ‘Abstraction and Empathy’ impacted his theory.⁵³ Worringer advocated the value of abstraction art and was an influential philosopher on modernism of art in its early stage. Especially, his influence was prominent during the initial period of Weimar Bauhaus (1919-1925).

The other side of the aspect was presented by such as Walter Gropius (1883-1969) inherited normative influence from Deutsche Werkbund (1989-1927). The industrial development in Germany and domestic cultural revivalism combined the movement of

⁵¹ Krufft, *A History of Architectural Theory from Vitruvius to the Present*, 323-24.

⁵² Frampton, *Modern Architecture: A Critical History*, 97.

⁵³ *Ibid.*, 98.

Deutsche Werkbund as opposed to the England Arts and Craft movement. Bauhaus precursor therefore, contradiction was holding the oppositions that characterized romanticism of Arts and Crafts, industrial and cultural rationalism as Werkbund, and in-between Nietzsche's controversial philosophy. These were enough momentum to shift and oscillate architectural styles, movements, and philosophy. In 1919, the proclamation of Bauhaus stated their aim "to create a new guide of craftsman, without the class distinctions ... between craftsman and artist."⁵⁴ Under this principle, architecture, sculpture, and painting are unified as one unity.

In Weimar Bauhaus the shift was made from individualism to anti-individualism, then to the Cubist movement. Swiss expressionist painter Johannes Itten (1888-1967) used different materials and textures promoting individual creativity and emotional approaches through Pragmatist John Dewey's philosophical influence and movement, 'learning-through-doing.' Later, rational design and anti-individualism approaches were introduced through Theo van Doesburg and the influence from De Stijl. The works of Walter Gropius were also included in these approaches. Itten's individualism conflicted against Gropius's normative way, receiving commissions from clients. Itten concerned creative value in his thought: "the highest aim of Bauhaus education the awaking and development of the creative individual in harmony with himself."⁵⁵ For him working for a client was not prioritized compared to his ritual philosophy. After Itten's resignation, Russian Constructivist was introduced through Moholy-Nagy (1895-1946). The influence of Constructivist was complimented along with the influence of De Stijl and post-Cubist in Bauhaus by 1922, and "after 1923 the Bauhaus approach became extremely 'objective' in the sense of being closely affiliated to the Neue Sachlichkeit movement"⁵⁶ in preparing for the establishment of Dessau Bauhaus (1926-1932).

⁵⁴ Proclamation of the Weimar Bauhaus in 1919. See *ibid.*, 123.

⁵⁵ Magdalena Droste, *Bauhaus*, trans. Karen Williams (Köln, Germany: Bauhaus-Archiv Museum für Gestaltung, 1993), 46.

⁵⁶ Frampton, *Modern Architecture: A Critical History*, 127.

In Dessau Bauhaus, the affiliation to the movement of *Neue Sachlichkeit* (New Objectivism) gained popularity through the activity of Gropius and Hannes Meyer (1889-1954). By this time, the material constrained Bauhaus method was completely established. An example can be seen in the work of Marcel Breuer (1902-1981) and national housing projects programming, *Siedlung* program that was notoriously called ‘existence-minimum.’ Bauhaus rationalism went far to the limit and extremist. After the resignation of Gropius for the first Director of Bauhaus in 1928, H. Mayer became successor as the second Director of Bauhaus. Mayer reacted to reform Bauhaus more socially responsive by establishing four departments including architecture, wood and metal production, and textiles. His position was taken over by Mies van der Rohe (1886-1969) until the end of Bauhaus in 1932. Mies was a prominent rationalist at a glance, but proved to be more complex. I will explore this in a later section with the connection to romantic aspects that controversially formed his rationalism. The inheritance from Bauhaus importantly includes the romanticism view through Itten and the rationalist view through Gropius. This oscillation needed the connection of these two through individualism that was also derived from the movement of *De Stijl*.

II.4. Individualism Development in De Stijl Style

The style and philosophy of *De Stijl* is widely influential as that of classical. Their vocabulary and language was established their status of Bauhaus to after modernism. Influenced by Cubism, the group *De Stijl* was formed by three founders in 1917. They were painter Piet Mondrian (1872-1944), painter Theo van Doesburg (1883-1931), and architect Gerrit Rietveld (1888-1964). The philosophical background of *De Stijl* was from Baruch Spinoza (1632-1677), and Dutch Calvinist thought. The principal inclination was to pursue a new concept of pure materiality of art that was described through the influence of Neo-Plasticism, such that “the new plastic art by removing the restriction of natural form.”⁵⁷ This distraction removal was an attempt through *new*

⁵⁷ First manifesto of *De Stijl*, 1918. See *ibid.*, 142.

consciousness that makes a “balance between the universal and individual.”⁵⁸ It was a thought of as the liberation of art form constrain of tradition. Painting movement of Neo-Plasticism influenced De Stijl expression of pure art. In the later period the movement became closer to the movement of *Suprematism* and *Neue Sachlichkeit* in order to produce Elementalist expression. In architecture, Schroder-Schrader House by Rietveld is the representative work by using asymmetrical form with primary colors. The movement aimed to achieve universality, which was a new language and style that could only produce artificially delimited culture. New plastic unity reflected with economic, mathematics, and the pure logic of reduced color which has no further reason for existence. Their emphasized axial was universality as logic, and individualism as consciousness. These contributed to the formation of a rational aspect in Bauhaus, modernism, and after modernism. The oscillation is within rational range, but the emphasis on individualism was prominent.

II.5 Modernism Architecture Development

Although the twentieth century modernism architecture can be simply explained as rationalism,⁵⁹ the aspects of romanticism are also important. Modernism architecture such as Functionalism architecture, International Style, and Organism architecture were predominant movement but they were the steps for the next movements. During these eras, philosophy of science, empiricism, and evolutionary theory developed the technological and mental transformation of modernism. This philosophical movement contributed to the shaping of universalism, utopianism, intuitivism, regionalism architecture, and towards postmodern style. These *isms* oscillated between rationalism and romanticism, then in the 1960s this flexural situation was transformed to pluralistic architecture which in generally was accepted as postmodern style architecture with the

⁵⁸ Ibid.

⁵⁹ For example, the domination of rationalism in modernism is listed in Encyclopedia of 20th Century Architecture. See Vittorio Magnago Lampugnani, "Rationalism," in *Encyclopedia of 20th-Century Architecture*, ed. Vittorio Magnago Lampugnani (New York, NY: Thames and Hudson, 1986).

influence of linguistics, French Structuralism and Post-structuralism.⁶⁰ The following description of architectural styles and movements will show the range of historical background of this research. I will discuss the influence of philosophy on architecture in the next chapter - *Influence of Philosophy On Architecture in the 19th Through 20th Century*.

With respect to Functionalism and Organism, they related to the emerging of high modernism architecture, (such as Louis Sullivan, Adolf Loos, Frank Lloyd Wright, Le Corbusier, and Mies van der Rohe) they contributed to the development of function and style related to both rationalism and romanticism aspects. For example, regarding the notion of ‘Organic’ architecture, Sullivan and Wright were both consciously appraised that organism holds the necessity of rationalism and romanticism. Loos’s criticism of ‘Ornament’ innate romantic assertion rather than rational argument in terms of the antagonistic view to the figurative form of architecture in spite of eclectic practice in his domestic interior design. There is strong univalent coexistence of rational ideology and romantic reality. A form of utopianism can be seen in Wright’s egalitarianism which is called ‘Usonian,’ and Le Corbusier’s machine architecture that influenced urbanism in CIAM. Mies van der Rohe maintained his character with romantic aspects such as the influence from Bruno Taut’s (1880-1938) Glass Chain and rationalism of Dessau Bauhaus. The commonality of these movements share the tendency that one architect swung between rationalism and romanticism. Rationalism can be seen in a different way and in a different context. Rationality of Italian Futurism demonstrated the expression of anti-traditionalism while traditionalism is also rational in the case of classical architectural form. The freedom of expression seems to be both rationalistic and characteristic of the Romantic Movement. Regionalism, for example can be seen in the movement of metabolism in Japan during the 1960s that shares an aspect of organism

⁶⁰ Regarding the origin of postmodern architecture, for example, Heinrich Klotz declares the birth of postmodernism as “primarily a designation of a break of continuity” such as treatise of Robert Venturi and the work of Aldo Rossi’s typology and linguistic approach. Although the popularity of the name ‘Postmodern’ did not come yet, the phenomenon of postmodern was clear. See Klotz, *The History of Postmodern Architecture*, 3-5.

and a biological view. This is in opposition to universal rationalism with co-habitation of symbolism in a regional culture. Depending on a cultural context, these movements can be interpreted as both rationalism and romanticism. I will explore these oscillations in the following examples that demonstrate the history of architecture in modernism.

Adolf Loos (1870-1933) was an influential architect with his strong inclination toward anti-classicism and against ornamental expression of architecture. ‘Ornament and crime’ is labeled to justify many activities of modernism of architecture for the refusal in use of classical vocabulary and ornamental elements. Loos was affected by the writing of Louis Sullivan (1856-1924), ‘Ornament in Architecture’ that provoked the ornamental value without actual ornament was based on his notion of *organic architecture*.⁶¹ Loos’s moral position synchronized due to the desire to express writing of ‘Ornament and Clime’ in 1908. His rejection of ornamental architecture, Art Nouveau Style in Vienna Secession was addressed by his philosophical position as rationalism by divorcing of architecture from art. Architecture was obtainable only for aristocrat from his point of view, and he argued this situation. But his tendency towards extremist made his isolation from the societies including his successors. The oscillation between ornamental architecture and the idea of building separated from art has problematic issue for the expression of architecture for societies including the ‘purist’ of architecture.⁶²

Loos implemented his activities and works as a rationalist in theoretical scope, but simultaneously he adapted tradition at the local scope. Loos’s work was partially traditional especially in interior design. That makes an eclectic approach for him that conflicts with its exterior as we can see in his representative work, Steiner House in Vienna (1910). Loos’s rationalism invented a design method called ‘Raumplan’ that was applied to the mass production of housing program (1920-1922).⁶³ For romanticism account at the same period in England, Arts and Crafts movement was populated, and Weimar Bauhaus acknowledge this influence. This paralleled social situation can be

⁶¹ Frampton, *Modern Architecture: A Critical History*, 90.

⁶² *Ibid.*, 91.

⁶³ *Ibid.*, 94.

seen as the process that develops modernism in architecture in rationalism and romanticism oscillation.

Frank Lloyd Wright's (1867-1959) developed his style with the influence of organism, individualism, and utopianism. His early style represented the Prairie School Style as seen in the Robie House (1908-1910). He was influenced by his mentors Louis Sullivan, and Henry Richardson (1838-1886)⁶⁴ who was devoted to the revivalism of medieval style architecture. Prairie School held heritage from the Arts and Crafts movement in England. By 1905, the Prairie Style was fully matured. Wright's style was also realized as Pre-Columbian profile (Maya revival style). For example, the Imperial Hotel in Tokyo, Japan was designed by Wright with local material survived the Great Tokyo Earthquake (Kanto Earthquake) in 1923. Beside the use of traditional materials for the Prairie Style, Wright's recognition of the value of machine innovation for the development of civilization was addressed his writing, '*The Art and Craft of the Machine*' (1901)⁶⁵ This rhetorical use of machine can be seen in his work in Robie House with cantilevered design earlier time, and crystallized with his organic architecture later in Kaufmann House known as Falling Water (1936). The oscillation between the influence from Arts and Craft movement in Prairie style and his radical statement that advocated the value of machine is connected his two aspects of theoretical consideration. These are the notion of 'organic architecture' and his egalitarianism along with individualism.

Regarding the organic aspect of Wright's work, Wright employed the idea of 'organic architecture' from his mentor Louis Sullivan, and developed it further as the idea, 'form and function are one,' which is a Platonic form. His meaning of *organic* can be explained as "the relationship of parts to the whole was an essentially feature: every part should have its own identity, but at the same time it should be inseparable from the

⁶⁴ Ibid., 57.

⁶⁵ Frank Lloyd Wright, "The Art and Craft of the Machine," *Brush and Pencil* vol. 8, no. 2 (May, 1901). Accessed September 30, 2013, <http://www.jstor.org/stable/25505640?seq=11>

whole.”⁶⁶ In this context Wright sees the building as a part of landscape nature and the design of building is the continuation of nature. The formal treatment of continuation is being carried by the horizontal layout of architectural elements and the openness towards natural environment. In the Kaufmann House (1936-1939) his design intents can be understood in this continuation and termination by the vertical architectural elements simultaneously.

Wright’s philosophical disposition was egalitarianism, which was coined by the ‘Usonian’ culture. This cultural characteristic was relevant to individualism and mass ownership of automobile. His urban plan model was anti-urban and his planning concept represented the traditional way of the nineteenth century city model. His conceptual proposal, Broadacre City reflected his city planning theory that “city will be everywhere and nowhere”⁶⁷ that is represented his anti-urban tendency and decentralization concept which was coined with Usonian culture. Indeed, Wright’s “Usonian culture and Broadacre City were inseparable concept.”⁶⁸ In our present time, his view can be seen in suburbia and edge city in current U.S. city structure. In this extent, Wright was holding utopianism without focusing the dissolution of city problem. He “failed to confront the urgent issue of power that was fundamental to the Broadacre concept.”⁶⁹ His Usonian period works represented by bipolar directions including the design of homes (the process of nature), and the design of office space (the idea of sacrament). His representative works at that time were Kaufmann House and Johnson Wax Building (1936-1939). Wright’s oscillation showed both rationalist and romanticism aspects in the concept of Usonian and utopianism. In the concept of organic architecture he succeeded to blend romanticism (association with nature) and rationalist (formal concept of his version of machine metaphor) aspect.

⁶⁶ Jürgen Joedicke, "Organic Architecture," in *Encyclopedia of 20th-Century Architecture*, ed. Vittorio Magnago Lampugnani (New York, NY: Thames and Hudson, 1986), 254.

⁶⁷ Frampton, *Modern Architecture: A Critical History*, 190.

⁶⁸ *Ibid.*, 191.

⁶⁹ *Ibid.*

Swiss born architect Le Corbusier (1887-1965) was the one of the most influential architects known with his notion of machine age aesthetic for modernism after 1920s. His innovative ideas reached wide ranges in architectural language, material technology, and urbanism. His architectural language intended by him with mathematical creation and “the house is machine for living in” according to his neo-platonic theory written in *Vers une architecture (Toward an Architecture)* in 1923.⁷⁰ The experience under Auguste Perret (1874-1954) provided Corbusier familiarity with the architectural materials, especially the plastic new material that is reinforced concrete. His use of reinforced concrete, like Frank Lloyd Wright, and his innovative architectural system guided his typological approach of architecture as opposed to a neoclassical formal system. Frampton explained this as objects-types, for example, Loos and ‘purist’ pursued the similar typological direction and association to Cubism movement. His objective rationalism and romantic mind with machine metaphor was expressed such as “from a critical and objective point of view, we shall arrive at the ‘House Machine,’ the mass production house, healthy (morally so too) and beautiful” in his writing of *Toward an Architecture*.⁷¹

His oscillation of philosophical and creative background can be traced from the transition between his early education from Arts and Crafts movement to the experience with the association of materials, especially plastic concrete, and the utopian consciousness learning through commune life style at Charterhouse of Ema. Frampton described this as his critical turning point.⁷² Originally, Corbusier was sensitive to typological manner originally because of his early time influence from Owen Jones writing, *The Grammar of Ornament* (1856). At his base the consciousness of typology swung between old modes to new modes, classical to technology. Through new plastic concrete Corbusier was possible to transform typology itself unlike the old mode of stone structure. Frampton explained “his ‘dialectical’ habit of mind” which can be seen

⁷⁰ Le Corbusier, J.L. Cohen, and J. Goodman, *Toward an Architecture* (Los Angeles, CA: Getty Research Institute, 2007), 10.

⁷¹ Frampton, *Modern Architecture: A Critical History*, 153.

⁷² *Ibid.*, 150.

in his “ever-present play with opposites – with the contrast between solid and void, between light and dark, and between Apollo and Medusa.”⁷³ His oscillation was embedded in his early time along with the shift from old modes to that of modern, romanticism to rationalism. But in his origin, his rationalist mind was associated with architectural language grammar, which contributed to the development of modernism architectural language.

Corbusier’s architectural language exemplified some of the important modernism style characteristics. His housing project such as Villa Savoye (1929) characterized ‘five points’ including (1) the pilotis, (2) the free plan, (3) the free façade, (4) the long horizontal sliding windows, and (5) roof garden.⁷⁴ Le Corbusier’s language such as in Villa de Monzie (1927) was compared with Andria Palladio’s villas such as Villa Malcontenta (1560). His Villa Savoye was analyzed in terms of his design sources with the aspect of the relationship to the Palladian architecture and Purist version Gothic revival. According to Frampton “Le Corbusier made the imminent Classicism of the Villa Savoye.”⁷⁵ Other characteristic of Corbusier’s design was elementarism which can be seen at the international competition for United Nation Building, Geneva (1927). His rationalism approach to the complexity of building was through elementarism. The expression and method of elementarism needs to be shifted to the mode of expression with vernacularism from 1930s. However, his activity will be bipolar between the involvement of urbanism and domestic scope, vernacularism. This is the oscillation between universal *object-types* and local existential language of architecture.

His influence of urbanism on CIAM (International Congress of Modern Architecture, 1928-1959) promoted functional aspects of building technology and urban design theory, which was intended to realize machine city and high density housing. Subsequently, his urban design theory was harshly criticized by Louis Mumford (1895-1990) and Jane Jacobs (1916-2006). The origin of his high-density skyscraper plan was made up from

⁷³ Ibid., 149.

⁷⁴ Ibid., 157.

⁷⁵ Ibid., 158.

his prototypical housing unit of Maison Citrohan (1920). This unit type was stacked vertically. His rational format of city was created from the accumulation of his typology which is coined with Loos's Raumplan, objects-types design method. In other words, this process was a standardization of living machine that contributed to the gentrification of the city. The conflict with this process was highlighted by Mumford's humanity and Jacob's inclusive city view.

Corbusier's typological architecture in modernism changed to vernacularism under the influence of Brutalism from 1930s and New Brutalism associated with existentialism from 1950s. The characteristics of Brutalism are formed with "honest presentation of structure and materials," and that of rationalism "mode of composition based on the topography." Brutalism intended to show the physical clarity and comparison in "structural, spatial, organizational, and material concept" to define metaphysical condition.⁷⁶ Corbusier developed his vocabulary as "Brutalism Style" in his later work.⁷⁷ His freedom of architectural expression produced monumentality of architecture, which can be seen in such works as the Unité d'Habitation (1947-1952), Ronchamps Chapel (1950-1955) and the Dominican monastery of La Tourette (1956-1960). The destination toward Brutalism can be defined from his origin. Krufft pointed out Corbusier's two philosophical combined origins. Krufft described: "From the beginning there are in Le Corbusier two strands of thought which appear to be mutually exclusive but which he combined to form a highly personal synthesis: on the one hand his idealistic Swiss Calvinist education, and on the other the rationalist and functionalist influence that came from Viollet-le-Duc, Choisy and Guadet, together with his personal link with Perret and Garnier."⁷⁸ Tony Garnier (1868-1948), Julien Guadet (1834-1908) and his son Paul Guadet (1873-1931) are of the French Beaux-Arts style. Corbusier was influenced by Beaux-Arts tradition of L'Eplattenier's teaching and through Owen

⁷⁶ Reyner Banham, "New Brutalism," in *Encyclopedia of 20th-Century Architecture*, ed. Vittorio Magnago Lampugnani (New York, NY: Thames and Hudson, 1986), 246-49.

⁷⁷ Frampton, *Modern Architecture: A Critical History*, 266.

⁷⁸ Krufft, *A History of Architectural Theory from Vitruvius to the Present*, 396.

Jones's (1809-1874) *Grammar of Ornament* at his early stage,⁷⁹ and he transformed his Beaux-Arts language as rational Elementalist language. Krufft called Corbusier's inclination as "idealist-rationalist approach."⁸⁰ Therefore, the oscillation of Corbusier is between rationalism as purist and idealism as Calvinist. Within these extensions, his Brutalism approach should be understood. His rationalist approach as Elementalist was shifted to and oscillated with idealism that sought vernacularism that was expressed as Brutalism.

Mies van der Rohe (1886-1969) was influenced by Hendrik Petrus Berlage (1856-1934) and Peter Behrens (1868-1940) in his early development. He also possessed neoclassical tradition of Karl Friedrich Schinkel's (1781-1841) philosophy that taught him the idea of Baukunst. Architecture became one kind of art even if Hegelian views depressed the architecture's status at the bottom. The influence of German Idealism was prominent to Schinkel's philosophy. But, his theoretical oscillation was the evidence of his romantic view. Krufft explained that he had five phases including (1) a Romantic phase (1803-05), (2) a rational-Romantic phase (1810-15), (3) a Classicist phase (c.1825), (4) a 'technicist' phase (c.1830), and (5) a 'legitimize' phase (c.1835) according to Goerd Peschken.⁸¹ Mies originally inherited the classicism of Schinkel who fluctuated his architectural philosophy between romantic, rational, tectonic, and legitimating poetics of architecture. In the final stage Schinkel revealed dogmatic classicism according to Krufft.⁸² There can be little doubt that Mies was benefited from the last phase of Schinkel's philosophy.

Romantic aspects of Mies also turned his direction as well. That was his nature but also departure simultaneously. After World War I, Mies was influenced by Taut's Glass Chain. His work of Friedrichstrasse competition (1921) showed this evidence that Mies

⁷⁹ *Grammar of Ornament* influenced widely at the time including William Morris according to Iani Zazek . See Owen Jones, *Grammar of Ornament* (New York, NY: DK Publishing, 2001), 15.

⁸⁰ Krufft, *A History of Architectural Theory from Vitruvius to the Present*, 397.

⁸¹ *Ibid.*, 297.

⁸² *Ibid.*, 299.

was attempting to abandon Schinkel's neoclassicism in order to show "will to form,"⁸³ Nietzschean philosophy and expressionism of that time in Europe. Mies' work held three influences after 1923, after his participation in *magazine G* edited by Hans Richter (1888-1976) and others: (1) the Berlage brick, (2) Frank Lloyd Wright through De Stijl (showed this type of work in Brick Country House (1923), and (3) Kasimir Malevich's Suprematism.⁸⁴ In 1932 Mies' contribution to Weisenhofsiedlung manifested the first International Style.⁸⁵ His masterpiece the German Pavilion (1929) in the Barcelona World Exhibition was the climax of his early works. He entirely expressed his asymmetric free plan with this work similar to De Stijl style. In Bauhaus, the expression of Neue Sachlichkeit prevailed in Dessau Bauhaus (1926-1932). But, Mies' idealism did not fully accept Neue Sachlichkeit even though he became director of Bauhaus after H. Meyer in 1930 because of the affinity for German Romantic-Classicism, which was of Schinkel.

Mies' swing between Romantic-Classicism and Suprematism was superseded by latter with the work of Illinois Institute Technology campus design (design started 1939, two years after arrival in the United States). Mies' influence on Suprematism was brought from De Stijl along with asymmetric free plan.⁸⁶ The integration and articulation of structural system in curtain wall became successive structural monumentality of his trademark with glazed surface of walls. His work of Farnsworth House (1945-1950) achieved the ideal balance between Schinkel's tradition (symmetry) and Suprematism (asymmetry) with the glass skin which is "almost nothing (beinahe nichts)."⁸⁷ He was a director of the department of architecture at IIT (1939-1959) and the champion of International Style. Although he oscillated his style between Romantic-Classicism and Suprematism within his works, there are discussions that his swings might be correlated

⁸³ Frampton, *Modern Architecture: A Critical History*, 116. 'Will to form' and 'normative form' was opposition reflected in the contrast between classicism and individual organic form at the Cologne Werkbund Exhibition in 1914.

⁸⁴ Ibid., 163.

⁸⁵ Ibid.

⁸⁶ Ibid. The influence of free plan from De Stijl was described such "Suprematism had the effect of encouraging Mies to develop the free plan.

⁸⁷ Ibid., 235.

to the variance of International Style between the styles that of Palladian composition (symmetrical, centripetal) and that of Wright's Free Style plan (asymmetrical, centrifugal).⁸⁸ In other words simply Mies' minimalism and rationalism form is oscillating between Romantic-Classicism and Suprematism. Mies' oscillation might be similar to that of Philip Johnson in postmodernism architecture.⁸⁹ The architectural vocabulary of Romantic-Classicism was further developed in late modernism and postmodernism with eclectic manner made up by classical form application.

As opposed to International Style, the vernacularism became the other side of architectural oscillation that can be seen in the Nordic region. Possibly, Alvar Aalto (1898-1976) was influenced by Henry H. Richardson's Revivalism and Romantic Classicism of Schinkel.⁹⁰ Richardson was the authority of Romanesque revivalism that was one of the origins of Gothic revivalism at the time. For Aalto's earlier work, his style was between classicism and vernacular taste. He was influenced by Gunnar Asplund (1885-1940) who held Nordic Classicism along with Otto Wagner's (1841-1918) Romantic Classicism.⁹¹ Nordic Classicism is characterized as the combined style of vernacularism and neoclassicism in addition to German Werkbund. Aalto once was influenced by Constructivists and departed from them to return to the Finnish National Romantic movement. His Finish Pavilion (1937) represents this movement, and presented his design principle – the formulation of site-planning principle that provides human scale building surroundings, “to create an intimate relationship between Man and Architecture” written in Aalto's collected works in the writing of Frampton.⁹² His approach was called ‘organic’ and ‘humanism’ design. He concern was to create an intimate relationship between Man and Architecture” with the site to be humanistic with

⁸⁸ Ibid., 236. Colin Rowe's argument was explained by Frampton. “The whole evolution of international Style in architecture was profoundly affected by a conceptual schism between centripetal and centrifugal space...”

⁸⁹ Krufft, *A History of Architectural Theory from Vitruvius to the Present*, 437-38. According to Krufft, Philip Johnson's “swing form one extreme to another, on which he has himself wittily and perceptively commented, has taken him to a deliberately eclectic ‘romantic Classicism’ and made him one of the spiritual furthers of so-called Post-Modernism.”

⁹⁰ Frampton, *Modern Architecture: A Critical History*, 192.

⁹¹ Ibid., 195.

⁹² Ibid., 197.

the incorporation of men's movement.⁹³ Although Aalto maintained a functionalist and rationalist principle, his earlier work showed rational-constructivist in such as Villa Mairea (1938-1939), and his later work characterized Finish vernacularism with Finish timber and other materials such as brick. The Saynatsalo Town Hall (1949-1952) is one of his representative works around 1950s. He kept himself far from the functionalism of the 1920s, and retained an organic design approach while his vernacularism of Nordic tradition is merged with Classicism. In postmodern architecture, for the notion of critical regionalism Aalto's work was analyzed in order to focus on twofold simultaneities, universal tectonic aspect and the local relationship between architecture and human.⁹⁴

II.6 Late Modernism and Toward Postmodern Architecture

The development toward postmodern architecture was roughly two ways of degree which can be understood in the reflection on the term Post-Modernism; "view opposed," or "superseding modernism."⁹⁵ The first view can be taken as reaction to modernism and the opposition to the rationality of modernism. The second view is that of new rationalism that aims to replace normative modernism of architecture. Postmodern architectural expression and style takes both with some level of degrees. The paradigm shifted in the 1960s and 1970s for the theory of architecture.⁹⁶ The oscillation between rationalism and romanticism in modernism architecture was also extended to the oscillation between universalism and localism in the age of postmodernism. The notion of critical regionalism extensively dictates this point in terms of the cohabitation of

⁹³ Ibid. Aalto's writing in his collected works.

⁹⁴ Ibid. Frampton's notion of critical regionalism contains the many aspects. Vernacularism is not just regional anti-technology. Frampton sought both ways with critical reflective analytical mind. Aalto's humanism architecture was one of the cases.

⁹⁵ Robert Bruegmann, "Post-Modernism," in *Encyclopedia of 20th-Century Architecture*, ed. Vittorio Magnago Lampugnani (New York, NY: Thames and Hudson, 1986), 267.

⁹⁶ Many theorists regard this paradigm change in the theoretical arena of architecture. For example, Jencks, *New Paradigm in Architecture: The Language of Post-Modernism*.

tectonic aspects and locality of architecture. Functionalism ended⁹⁷ and new historicism was forming a new architectural theory under the philosophical influence of structuralism, post-structuralism, phenomenology, and psychology. Heidegger's existentialism began to shape/influence anti-modernist architecture, which is phenomenologist architecture.⁹⁸ In phenomenology architecture Heidegger's notion of 'Dasein'⁹⁹ implemented the critical approach in architecture. This approach requires self-reflective analytical process to shape architecture more meaningful in domestic, personal, and cultural. The influence of postmodern science and linguistics knowledge requires a new way of thinking other than the normative way of expression. A theoretical approach to the language of architecture became dominantly the background theory in the field of art and architecture. We accept this as the postmodern movement culture beyond architectural style. The dimension of opposition and superseding of modernism architecture will be described between rationalism and romanticism.

The oscillation between rationalism and romanticism can be seen within the development of postmodern architecture. With respect to the rationalism tradition in Europe, Italian neo-rationalism with consideration of typology, the scope shifted to a new way of sharing urban artifacts with new meanings of function. That is a systemic process of experience in a place rather than purposeful function that modernism holds. Rationalist Aldo Rossi (1931-1997) and Peter Eisenman (born in 1932) theorized this view.¹⁰⁰ In the States, postmodern historicism dominated the commercialism of architecture under the name of populism architecture which "Jencks effectively characterized Post-Modernism as being a Populist art of immediate communicability."¹⁰¹ Leaning toward the view of romanticism, in postmodern historicism, the normative architectural expression was twisted by the eclectic free style that deforms the

⁹⁷ Peter Eisenman's Post-Functionalism explains the meaning of new function. See Peter Eisenman, "Post-Functionalism," in *Theorizing a New Agenda for Architecture: An Anthology of Architectural Theory 1965-1995*, ed. Kate Nesbitt (New York, NY: Princeton University Architectural Press, 1976), 78-83.

⁹⁸ Norberg-Schulz, *The Concept of Dwelling – on the Way to Figurative Architecture*.

⁹⁹ Heidegger, *Being and Time*.

¹⁰⁰ Aldo Rossi, *The Architecture of the City*, trans. Diane Ghirardo and Joan Ockman (Cambridge, MA: The MIT Press, 1984).

¹⁰¹ Frampton, *Modern Architecture: A Critical History*, 292.

chronological layout of time. In the *free style architecture* the classical architectural vocabulary and the relation to the cultural meaning were displaced. In this respect, postmodern historicism has distorted the idea of historicism,¹⁰² and figurative architecture of postmodern style has ironical characteristics as oppose to neoclassicism architectural language stability. Regarding the ironical aspect of postmodern language of architecture, Jean Baudrillard explained deceptive simulacra.¹⁰³ But, Deleuze hold simulacra is not deception rather it proves realer reality than real. Ironical form of postmodern architecture can be seen in this example.¹⁰⁴ This view can be seen as scenographic architecture such as Michel Graves' work and popular culture architecture that Jencks described in his writing about postmodern language. While the first view stressed the romantic aspects, the second view is to overcome the functionalism of modernism architecture. Modernism architecture was characterized as functional and rational. Aldo Rossi established new meaning of function and dealt with the complexity and autonomous of architecture in Europe. His theory was arguing against normative rationalism of modernism architecture. In the United States, Robert Venturi took a position to deal architecture and urban environment in terms of complexity and contextual problem. Rossi influenced neo-rationalism architecture of postmodernism architecture, while Venturi is influential for scenographic architecture and that of contextual. The experience of architecture is complex and contradicted in this new style of architecture. Radically, this style combines rationalism and romanticism that belong to a universal worldview, which originated from the idea of Enlightenment. However, deforming time experience (e.g. the deformation and shallowness of classical vocabulary) the style became conscious to contextual and existential experience of architecture (e.g. locality and vernacularism). The oscillation between rationalism and

¹⁰² Alexander Tzonis explained postmodern historicism is *citationism* and *strangemaking*. In general deformation or deviation from the original can be understood as a negative general explanation of postmodern architecture and art form. See Alexander Tzonis and Liane Lefaivre, *Classical Architecture: The Poetics of Order* (Cambridge, MA: The MIT Press, 1986), 227, 79.

¹⁰³ Jean Baudrillard, *Simulacra and Simulation*, trans. Sheila Glaser (Ann Arbor, MI: The University of Michigan Press, 1999).

¹⁰⁴ Gilles Deleuze, *Essays Critical and Clinical*, trans. Smith W and Michael A. Greco (Minneapolis, MN: University of Minnesota Press, 1997). *Difference & Repetition*, trans. Paul Pattern (New York, NY: Columbia University Press, 1994).

romanticism in history, and the combination of these are critical for the movements of architecture that inevitably need to be analyzed in the association with the influence of philosophy.

The development of neo-rationalism was formed under the influence of Italian rationalism architecture through such as Giuseppe Terragni (1904-1943). Rossi was a rationalist architect who had used reduced formal vocabulary. His use of form was simple geometrical use which can be created as typology, and perhaps with the selective materials that expresses rationalist concept. Rossi's typology pursues the possible autonomous architecture and monumentality. In his writing '*Architecture of the City*' he attempted to redefine the meaning of functionality of architecture that is systemic process rather than purposeful. This new meaning of function is based on the concept of 'analogous' method which involves '*skeleton*' and '*collective memory*.' Skeleton of architecture can be meaningful with new function consist of event of collective mind's experience, that is correspond to new meaning of history and an evidence of time. He called this aspect of experience as '*locus solus*.' Peter Eisenman explains his new formulation focuses on the process that mediates elements of history and typology. History is "analogous to a "skeleton," Typology is "the instrument, the apparatus." Skeleton is the condition to serve "as measure of time, in turn, is measured by time." History "lies in its material" that is "the object of analysis the city."¹⁰⁵ Analogous method takes architecture is autonomous because City is autonomous. City is composed archeological artifacts as instrumental objects that require new meaningfulness and functionality. In a sense, Rossi is a functionalist but not that of modernism architecture. New functionality of collective artifact, which is ultimately city, is satisfied with two elements that is collective mind and process of experience. When the original purpose of a building is lost then we have only a skeleton. Thus history can be embedded in this skeleton. Rossi's concept of '*permanence*' is applied to a continuation of artifact. That is new history, is the core, '*primary structure*' of city that can maintain the meaningfulness with the concept of '*locus solus*' which is made of skeleton and

¹⁰⁵ Rossi, *The Architecture of the City*, 5.

collective minds. Locus solus is “the specific but also universal relationship between a certain site and the buildings”¹⁰⁶ and relations to “the singularity of signs.”¹⁰⁷ Signs are composed of artifacts that can be a core of permanence. Rossi was clearly concerned with the collective mind of people who created and will create history through new meanings of function that is locus solus. Between individual experience and collective mind, he inserted some level of linguistic approach such as Ferdinand Saussure. The value of the collective mind and experience has to find the mitigation between individualism and singular locus of the collective mind that can share and define new history and new functionality of architecture and city.

Rossi found archetypal typology for this aim. Typology is analogous to the collective mind that can supersede individual experience. Clearly his oscillation is in this point. Rossi was rationally oscillated between the individual memory/experience and collective memory in locus. His notion of permanence was mitigation of them. From the point of linguistics, Saussurean semiology, individual history corresponds to ‘diachronic’ relations, while collective mind is that of ‘synchronic.’¹⁰⁸ In the later chapter (Chapter V – *Saussurean Postmodern Architecture*), I will analyze this along with language theory of architecture. Under this direction, neo-rationalism influenced the work of the ‘Berlin School’ such as Leon Krier (born 1946), and earlier Mario Botta (born 1943) of ‘School of Ticino.’ Botta is influenced by Le Corbusier and Louis Kahn in addition to Rossi’s rationalism. Their work keeps tendency to associate with context which is the relations between buildings and nature regardless of being manmade or that of nature and both.

Architecture in the United States before postmodernism was concerned with the issue of representation and ideological expression. This approach clearly requires normative rationalism. Toward the age of postmodern, Robert Venturi argued this by means of architectural complexity in his writing, *Complexity and Contradiction in*

¹⁰⁶ Ibid., 103.

¹⁰⁷ Ibid., 6.

¹⁰⁸ Saussure, *Course in General Linguistics*.

Architecture.'¹⁰⁹ By comparison, Rossi and Venturi both dealt with the complexity of architecture and city, and argued against 'old functionalism of modernism architecture.' While "Venturi took direct sensory experience as his starting point," "Rossi imbedded his new theses in a comprehensive exegesis."¹¹⁰ Venturi developed his theory along with sign theory of architecture which gained popularity as a language of architecture based on semiology of Ferdinand de Saussure and other linguistics theories. His extremist aspect can be seen on his notorious definition of architecture as 'decorated shed,' which received an enormous antagonistic response. The affectivity of his treatise of complexity and contradiction was praised by Vincent Scully who described Venturi's *Complexity and Contradiction* to be the most important writing as same as that of Corbusier, 'Vers une Architecture.' Mies' International style was castigated as "less is bore." Venturi provided analysis on various styles in Mannerism, Baroque, and Rococo periods addressing the contradictory and complex form. His urban theory, learning from Las Vegas has an inclusive manner to accept an existing context to be a part of urban environment as opposed to the purism of modernism architecture. Venturi contributed to the establishment of pluralistic meaning of architectural theory which was widely discoursed at the time for the new way of expression of architecture, which is mannerism, against modernism architecture.

In the 1970s, postmodern architecture theory advanced architecture as a sign vehicle following signification theory of Charles Morris. Charles Jencks and other theorist of architecture supported this trend based on Saussurean linguistic view that is supposed to incorporate Peircean view. This view will be discussed in the following chapters regarding the difference between semiology and semeiotic. The styles were called eclectic or free style. Jencks described pluralistic meaning of architecture as 'multivalent' and 'double coded.' The coexistence of modernism architecture within traditional cultural context was labeled by Jencks in such ways.¹¹¹ This architectural

¹⁰⁹ Venturi, *Complexity and Contradiction in Architecture*.

¹¹⁰ Klotz, *The History of Postmodern Architecture*, 256.

¹¹¹ Jencks, *New Paradigm in Architecture: The Language of Post-Modernism*, 26-28.

language includes popular culture expression that was questioned in terms of the authentic meaning of architecture. In the 1980s, works of Michael Graves made popularity of ‘figurative architecture’ showing the transformed classical architectural formal vocabulary. This architectural style is referred to as ‘postmodern historicism’ or ‘postmodern eclectics.’ Although these two are identical in many cases, the differentiation of these depends on the inclination and the degree of deformation from the original classical style. Graves’ work has a tendency toward eclectic architecture rather than historicism, whereas Robert A. M. Stern is considered to be postmodern historicism architect. Stern conceived styles as language. His implication is our use of Classicism is not for the timeless language but “the mainstream ... of Western tradition.”¹¹² The determination of architectural form became independent from functional and scientific factors. Postmodern historicism and eclectic style of architecture obtained the citizenship with the imaginarily of metaphor, simulacrum. Between reality and fiction, simulacrum produced the spectrum and multiplicity of meaning. The use of classical vocabulary with the displaced context may produce nostalgic emotion that is also kind of perception of desire to the stability of form. The situation is contradictory in terms of the reality of context. The original figurative form aimed to create the relationship architectural form and human perception in a friendly manner. In that situation the meaning clearness is imbedded in the rational mind setting. The oscillation is in the value of classical form’s origin to postmodern style application which is destination. Our mind is between them in order to capture the contextual meaning of architecture.

With the influence from post-structuralism, especially from that of Jacques Derrida, Venturi’s complexity further was extended to Deconstructivist style. This style followed Derrida’s notion of deconstruction, which derived from philosophy of Derrida’s version of logocentrism opposing traditional view of logocentrism.¹¹³ The characteristics of this

¹¹² Gelernter, *Sources of Architectural Form: A Critical History of Western Design Theory*, 284.

¹¹³ Jacques Derrida, *Of Grammatology*, trans. Gayatri Spivak Chakravorty (Baltimore, MD: The Johns Hopkins University Press, 1997).

style were criticized harshly as ill formed virus infection by such as Nikos A. Salingaros.¹¹⁴ He argued the style is incoherent infections by the advocacy of rationalism view opposing this style's theory, deconstruction. The main theoretical underpinning is the notion of deconstruction which denotes un-do, dismantle. Derrida's logocentrism provided the interplay between inside and outside without having fixed center. Architectural implication traced this notion in order to express complexity of form that requires psychological affection, 'desire.' This formal system became popular among Peter Eisenman (born 1932), Bernard Tschumi (born 1944), Frank Gehry (born 1929), Zaha Hadid (born 1950), and Daniel Libeskind (born 1946). The trend of this style started around 1980s seems to continue as the expression of desire that can be seen in expressionism tradition. Emotion and desire predominates architectural form and psychoanalytical approach is the theoretical advocacy which comes from Jacques Derrida and Jacques Lacan.¹¹⁵ The linguistic approach of these theories is categorized as Saussurean semiology. I will discuss the similarity of signification system of these in the following chapters. The oscillation of this style can be seen as architectural fluidity and stability. They both can be categorized as romantic view.

In the 1980s, eclectic postmodern architecture along with modernism was questioned and argued in terms of the quality of place and the relationship to identity. This course of conduct was brought by the notion of 'critical regionalism.' Eclectic postmodernism, which is postmodern historicism, and modernism architecture were problematic, because they are both placeless. Former is placeless because of seeking populism architecture in consumerism, while the latter is because of non-characteristic universalism and functionalism that can be seen in modernism architecture. This reaction against postmodern historicism and modernism lead us to the consideration of vernacular architecture within modern environment, tectonic architecture. In this context of

¹¹⁴ Nikos A. Salingaros, *Anti-Architecture and Deconstruction* (Solingen, Germany: Umbau-Verlag, 2007), 87-101.

¹¹⁵ Hendrix, *Architecture and Psychoanalysis: Peter Eisenman and Jacques Lacan*. For example, Peter Eisenman's theoretical base is Lacanian psychoanalytical approach along with Derrida's concept of deconstruction.

progress and diversification of postmodern architecture, identity of architecture is more focused on as the relationship between cultural identification of self and architecture in postmodern architecture. Postmodernism architecture originally holds the tendency to be inclusive for cultural values which construct basic characteristic of vernacularism. Venturi's theoretical approach to unify the contradiction and accept the existing urban context reminds us to include different cultural identity. The notion of identity became critical matter for architectural theory, and at the same time, identity is associated with meaningfulness that leads us to a language of architecture.

The influenced from Kantian, existentialism, and phenomenology philosophy consolidated the notion of critical regionalism that rejects the dogma of functionalism architecture. The view of positivism was questioned by this architectural theory. Kenneth Frampton (born 1930), Alexander Tzonis (born 1937), for example, theorized the notion of 'critical regionalism' in the 1970s and 1980s. Tzonis with Lefaivre rooted current critical regionalism on Lewis Mumford as a reformer of this theory. They explained the idea of emancipation for both modernity, and the ethnic identity as types of regionalism and humanitarian aspects. Frampton emphasized Martin Heidegger's philosophy, phenomenology. Theoretical ground of the identity of architecture was discoursed for the relationship between architecture and human identity, natural environment, and social environment. These aspects can be characterized as the common concerns of ethical dimension of architecture and the relations of architecture and its context. Alexander and Frampton both developed 'critical regionalism' and are effective theorist for this matter. I will further discuss the dimension of critical regionalism in next chapter (Chapter III – *Influence of Philosophy On Architecture in the 19th Through 20th Century*) focusing on the idea of emancipation, the position to enlightenment, self-criticism, and the influence of phenomenology. Then, in the later chapters I analyze the connection of identity to the notion of simulacrum. Once identity is recognized as the major element of critical regionalism, the meaning of critical regionalism can be a necessary condition to the expression of postmodernism of architecture through reflective process of simulacrum.

As discussed above, phenomenology architecture and critical regionalism architecture disdained populism architecture, postmodern historicism architecture, eclectic architecture, and modernism architecture. Critical regionalism architecture seeks identity which has clear linkage between place and architecture. Frampton called such relations between “place and production,” that can be “pre-condition of architecture.”¹¹⁶ Place must “arises at a symbolic level with the conscious signification of social meaning and at the concrete level with the establishment of an articulate realm on which man or men may come into being.”¹¹⁷ Production has utilitarian aspects and place is symbolized from the ‘being.’ Therefore, critical regionalism architecture has to be realized in three realms’ relations, these are: place, production, and nature. Then identity must reside in this relationship. Architects who are considered to be this mode are, for example, Alvar Aalto (1898-1976), Mario Botta (born 1943), and Tadao Ando (born 1941). Alvar Aalto was Nordic architect who influenced modernism and postmodernism both with the use of natural materials, vernacularism architecture, and humanism architecture. Although he was a modernist architect who dealt with tectonic, his work is considered to cover a wide-range from rationalism to organic architecture. Mario Botta’s main recourse is combined with Aldo Rossi’s neo-rationalism, Le Corbusier’s brutalism, and Luis Kahn’s symbolic sublime. His architecture maintains contextual association between building and nature. Tadao Ando expresses pure materiality and design intention with clear relation to nature harmoniously and contradictory. His work awaken men’s sensible experience, sublime.

II.7 Modes of Architecture

History of architecture since in the nineteenth and twentieth century can be summarized as the woven relations of the axis of rationalism and romantic, and the axis of universalism and localism. At the age of neoclassicism, architecture consisted of the

¹¹⁶ Kenneth Frampton, "On Reading Heidegger," in *Theorizing New Agenda for Architecture: Anthology of Architectural Theory 1965-1995*, ed. Kate Nesbitt (New York, NY: Princeton Architectural Press, 1996), 444.

¹¹⁷ Ibid.

timeless language of ornament. Enlightenment was a standardized value system to orchestrate architecture and created the next version of rationalism that was Structuralism in architecture. However, this trend inherits the counter enlightenment that sought romantic aspects of architectural expression that formulated Art-Nouveau and organic architecture.

The movements in romantic aspects further established Arts and Craft Movement in England, and then relates to Bauhaus movement in terms of craftsmanship value. Although, Bauhaus itself was shifted between rationalism emphases like Gropius's work and the individual expression with emotional aspect like Itten's teaching theory. The movement of Modernism was characterized as rationalism and functionalism as a whole. But, at the earlier period in the twentieth century the controversial Nietzsche's notion 'will to form' inherited both rationalism and romanticism views. This basic norm created shifting modes within an architect as we can see in Schinkel and Mies' work. Therefore, modernism is not pure rationalism and functionalism.

And finally, in postmodern era architecture becomes more emotional and anti-rationalism with deformation, displacement, and fragmentation. Architecture expresses alternative expressions of ornament with alternative sequence and layout of historicism, the system of genealogy.¹¹⁸ By means of commercialism, this expression was adopted by consumerism as populism architecture and generalized. This alternative became general. This generality was questioned regarding the truth of architecture by critical regionalism. Neo-rationalism architecture is associated with this movement. The application of their typology that is archetypical and universal being questioned in the locality which critical regionalism stand for without conflicting tectonic and vernacular aspect of architecture. The analysis of this limited history of architecture showed shifting modes of architecture. If this phenomenon is true and inevitable the origin of

¹¹⁸ Term genealogy is from Foucault's notion. See, Pamela Major-Poetzl, *Michel Foucault's Archaeology of Western Culture* (Chapel Hill, NC: The University of North Carolina Press, 1983).

these modes should be analyzed. In the next chapter I will approach this origin through philosophy in the nineteenth and twentieth century influenced on architecture.

CHAPTER III

INFLUENCE OF PHILOSOPHY ON ARCHITECTURE IN THE 19TH THROUGH 20TH CENTURY

III.1 Introduction

The philosophical oscillation between authentic philosophy and its positing movements in enlightenment and counter-enlightenment, rationalism and romanticism, universalism and localism are seen as the parallel reflections on architectural movements, and theories in the modern movement versus postmodern movement, authentic style versus eclectic style.¹¹⁹ This includes counter reactive movements such as revivalism architecture in the nineteenth century and postmodern architecture eclecticism in the twentieth century. It is plausible that architecture received greater influence from philosophy.

To illustrate the complex relations between theory of architecture and philosophical influence, needed is a critical analysis of these oppositions as the background philosophies of architectural history ranging from nineteenth century Neoclassicism to twentieth century Modernism and Postmodernism. This analysis covers nineteenth and twentieth century Europe and North America corresponding to the described architectural history through nineteenth to twentieth century in the Chapter II. Also, the rationale of this coverage has a justification that philosophy in the eighteenth and nineteenth century of Europe produced many intellectuals for continental modern philosophy through Kantian philosophy and successors of him.

Therefore, this analysis' starting point is benchmarked in the nineteenth and twentieth century how philosophical movements influenced the theory of architecture with respect to neoclassical and early modernism in consideration of rationalism and romanticism. The engagement of enlightenment philosophy is a key component to analyze the influence from philosophy to architecture.

¹¹⁹ Gelernter, *Sources of Architectural Form: A Critical History of Western Design Theory*, 288.

III.2 History of Philosophy in the 19th and 20th Century

The comparison between neo-classicism and modernism architecture stems from timeless value of ornament and universal value of beauty of function which are influenced by neo-platonic philosophy and normative form of modernism architecture as rationalism which relies on positivism view. Although, this view essentially classicism and modernism are both rationalism influenced under enlightenment, anti-rationalism and romanticism took over more expressive architecture under the influence of counter-enlightenment in the modernism architecture period. The circumstances of these are woven. In the nineteenth and twentieth centuries, rationalism and romanticism philosophy paralleled the successive theory and the history of architecture.¹²⁰ The cultural transformation toward modernism in architecture was developed along with this paralleled relation.

Both rationalism and romanticism are concerned with the worldview of *universalism* and the idea of Enlightenment for and against. Enlightenment emphasizes a universal view while romanticism relies on feeling and intuition. They both share the individualism view.¹²¹ For the rationalism view, Jürgen Habermas (born 1929) described enlightenment associated with the idea of modernity. "The project of modernity formulated in the 18th century by the philosophers of Enlightenment consisted in their efforts to develop objective science, universal morality and law, and autonomous art according to their inner logic."¹²² However, the role of enlightenment on architecture was, for example illustrated by Winand Klassen as *the spirit of eclecticism* that was prepared by the rationalistic philosophy of enlightenment.¹²³ Therefore, the idea of enlightenment is not simply reduced to purist mind and need to be considered with its

¹²⁰ Regarding history of architecture, I consulted with the following writings: Frampton, *Modern Architecture: A Critical History*.; Kruft, *A History of Architectural Theory from Vitruvius to the Present*.; Mallgrave, *Modern Architectural Theory: A Historical Survey, 1673-1968*.

¹²¹ Solomon, *Continental Philosophy since 1750: The Rise and Fall of the Self*.

¹²² Jürgen Habermas, "Modernity – an Incomplete Project, and Architecture and Modernity," in *The Anti-Aesthetic* (New York, NY: The New York Press, 1998), 8.

¹²³ Klassen, *History of Western Architecture: A Semiological Approach to Architecture from a Designer's Point of View*, 190.

relation to anti-enlightenment, if eclecticism represents anti-purism and anti-rationalism. In the eighteenth century, the philosophy of enlightenment became Emanuel Kant's (1724-1804) Idealism at its climax in Germany, followed by Georg Wilhelm Friedrich Hegel's (1770-1854) view of dialectic in the nineteenth century, then transformed to existentialism philosophy of Martin Heidegger (1889-1976) in the twentieth century. This movement showed the shifting from rationality to anti-rationality in a sense.¹²⁴ The idea of Romanticism is associated with free mind and subjective value that "stressed the priority of the creative individual."¹²⁵ In the Enlightenment Period, before philosophy of language took over the initiative, as bipolar of rationalism and romanticism, the binary philosophical influence on architecture is described on the one side as "Positivism that makes everything ... determined by outside influence," while on the other, romantic "inner emotional source of art."¹²⁶ When the Enlightenment Period ended, then *representation-language* became the way of thinking¹²⁷ in postmodernism period. I will discuss later in this summary and in the Chapter V – *Postmodern Philosophy* for more details.

While positivist, rationalist, empiricism philosophy were normative influences on modernism, the oscillated axial directions of rationalism and romanticism are diversified, and invited radical critique in late nineteenth and twentieth century with (1) Phenomenology (Husserl, Merleau-Ponty), (2) Existentialism (Nietzsche, Heidegger), (3) Hermeneutics (Gadamer), (4) Analytic (Wittgenstein), (5) Structuralism (Lévi-Strauss, Saussure), (6) Postmodernism, Post-structuralism (Derrida, Foucault), and (6) American Pragmatism (Peirce, Dewey). These philosophical influences on architectural theories are summarized, for example by Winand Klassen through Phenomenology, Hermeneutics, and Deconstruction.¹²⁸ Mark Gelernter described the view of philosophical influence on architectural form as woven origin between subjective and

¹²⁴ Ibid.

¹²⁵ Gelernter, *Sources of Architectural Form: A Critical History of Western Design Theory*, 153.

¹²⁶ Ibid.

¹²⁷ David Harvey, *The Condition of Postmodernity* (Cambridge, MA: Blackwell Publishers, 1990), 27-28.

¹²⁸ Winand W. Klassen, *Architecture and Philosophy* (Cebu City, Philippines: University of San Carlos, 1990).

objective systems. Gelernter explained this system as “the paradox derives from a conceptual problem built deeply into Western culture’s most fundamental assumption about the individual and his relationship to the world.”¹²⁹ This paradox needs to be resolved through theoretical approach in the field of architecture. Klassen emphasized the philosophical influence on architecture. As he described “there are the humanistic and social sciences, such as Gestalt psychology and semiology, to mention only two which can deepen our knowledge of the influence of that build environment on us.”¹³⁰ In the following I will discuss major philosophies’ influence on the theory of architecture.

III.3 Enlightenment and Rationalism (Emmanuel Kant, John Lock)

The idea of Enlightenment in philosophy includes empiricism and rationalism which was explored science and intense intellectual development involving humanism, rationality, and universalism. This intense philosophical development started in England in mid-seventeenth century, in France and America in the mid-eighteenth century, and in Germany after these.¹³¹ Immanuel Kant (1724-1804) defined Enlightenment the following: “Enlightenment is man’s emergence from his self-incurred immaturity”; “Immaturity is the inability to use one's own understanding without the guidance of another.”¹³² Enlightenment in German Idealism in the eighteenth century was characterized as the “the process of undertaking to think for oneself, to employ and rely on one’s own intellectual capacities in determining what to believe and how to act.”¹³³ In the precursor of Kant the aspect of enlightenment was widely recognizable in the areas

¹²⁹ Gelernter, *Sources of Architectural Form: A Critical History of Western Design Theory*, 27-29.

¹³⁰ Klassen, *Architecture and Philosophy*, 1.

¹³¹ Solomon, *Continental Philosophy since 1750: The Rise and Fall of the Self*, 8-13.

¹³² Immanuel Kant, "An Answer to the Question: 'What Is Enlightenment?'," in *From Modernism to Postmodernism an Anthology*, ed. Lawrence Cahoon (Malden, MA: Blackwell, 2003), 45.

¹³³ William Bristow, "Enlightenment," in *The Stanford Encyclopedia of Philosophy* ed. Edward N Zalta (Summer 2011 Edition). Accessed October 27, 2012, <http://plato.stanford.edu/entries/enlightenment/>.

of philosophy including: (1) Science, Epistemology, and Metaphysics; (2) Political Theory, Ethical Theory and Religion; and (3) Aesthetic according to Bristow.¹³⁴

Descartes (1569-1650) influenced scientific aspects of enlightenment inherited in Cartesian philosophy that provided the foundation of physical world rationality. The recognition of reality of world, metaphysics of enlightenment was brought from Spinoza and Leibniz, then from the empiricism philosophers such as John Lock (1632-1704) and Isaac Newton (1643-1727). The objective and subjective truth stems from these philosophers' epistemological and rationalism aspects of enlightenment. They focused on the reason that attempted to emancipate from dogmatic authorities including religions and metaphysics. Enlightenment became therefore concerned with individualistic determination and needed to associate with skepticism like David Hume (1711-1776).

Kant established the foundation of scientific enlightenment through his writing 'Critique of Pure Reason.' Epistemological knowledge synthetically is defined as 'a priori.' By the time of Kant, enlightenment was known to be at its stage of climax, and the deterministic rationalism was theorized. Kant's Idealism however permitted to accept the nature of unknowable called '*noumena*.'¹³⁵ The characteristic of rationalism may be described as enlightenment that pursues the universal understanding through individualism and subjective standpoints. The effort of this comprehensive ideology was attempted in the areas of religion ethics, science, and aesthetics. In religion, rational reasoning of God permits the thinking "attempted to replace revelation."¹³⁶ This rationality was called 'deism' that the "movement held to a belief in: one God who created the world but does not intervene in is present functioning."¹³⁷ "Deism is the form of religion most associated with the Enlightenment" according to Bristow.¹³⁸

¹³⁴ Ibid.

¹³⁵ Term 'noumena' is described "they are simply things in themselves, ... things perceived as existing but only through a rational apprehension as limited concept." The term was used "in contrast to the term 'phenomenon' which does appear to sense." See, Reese, s.v. "noumenon."

¹³⁶ Ibid., s.v. "deism".

¹³⁷ Ibid.

¹³⁸ Bristow, "Enlightenment."

Political and ethical aspects of enlightenment were associated with the French revolution, English revolution, and American Revolution. Individual human right was partially emancipated from authoritarianism. The idea of enlightenment is connected to equality and freedom, but it was limited and contrast to Jean-Jacques Rousseau (1712-1772). John Lock's liberalism contributed to form the power of new class, Bourgeoisie that promoted a new political and cultural movement. Enlightenment formed the philosophy of natural science and contributed to the empirical methodology that makes epistemology free from dogmatic presupposition of knowledge.

In France, the aesthetic aspect of enlightenment provided the association of beauty and truth as unity. Truth was coined with the ideal imitation of nature which is beauty. Similar to the form of Neo-Platonism, philosophical aesthetic theory was a rational order of sensibility in nature emerged in the period of enlightenment. Classicism became a model in beauty that was the rationality that multiple objectivities responded to a subjective unification, human experience of beauty. Like Neo-Platonism ideal beauty was a rationalized order for enlightenment. The subjectivity was the key component of this aesthetic aspect. In Germany under Kantian idealism, aesthetic order became more rationalism and a statically ruled concept of pleasure, Kant's *disinterested* pleasure. The aspect of rationalism for enlightenment was static in France as Classicism and in Germany as ruled pleasure. This phenomenon required the transition to romanticism through counter-enlightenment in the late eighteenth and early nineteenth centuries.

The influence of enlightenment on architecture discerned as classicism and rationalism. The ideal of classicism was populated after Baroque in the eighteenth and nineteenth century in Europe with the form of neo-classicism. The term 'classicism' was used by historian in order to explain "the movement towards greater century which was coupled with a renewed interest in antiquity, particularly Greek art."¹³⁹ The movement of neo-classism conveyed the classical architectural form with the value of stability. Political

¹³⁹ Joseph Rykwert, "Neo-Classicism," in *Encyclopedia of 20th-Century Architecture*, ed. Vittorio Magnago Lampugnani (New York, NY: Thames and Hudson, 1986), 233.

reform in France provided an opportunity for the new class, Bourgeoisie to find their identity with Beaux-Arts style which influenced by neo-classicism. In Germany the work of Karl Friedrich Schinkel was also influenced by classicism even if Schinkel shifted from early romantic inclination toward later tectonic and the final ‘legitivist’ phase.¹⁴⁰ His characteristic of style was called romantic classicism, which is controversial against rationalistic enlightenment. In the postmodernism architecture classical architectural vocabulary was used with mannerist way along with the postmodern historicism movement in 1970s.

Rationalism contributed to the forming of modernism in the nineteenth century with a revival movement in terms of architectural materialism and architectural structuralism that was seen in the movements such as Romanesque and Gothic style revivalism in the nineteenth century. A structural rationalist Viollet-le-Duc (1814-1879), a classical rationalist Gottfried Semper (1803-1879), and an architectural historian Auguste Choisy (1841-1909) are considered to be rationalists who inherited from enlightenment in the nineteenth century. Rationalism was widely underlined for the development of modernism in general. Architecture was not an exception from this influence roughly in the first half of the twentieth century. In the age of Bauhaus, especially Walter Gropius and Mies van der Rohe were influential for the development of high modernism architectural style in the twentieth century. In the early twentieth century Auguste Perret (1874-1954), Peter Behrens (1868-1940), Adolf Loos (1870-1933), De Stijl group, and as second generation Le Corbusier (1887-1965) are considered to be rationalists. The movement of CIAM (Congrès Internationaux d’Architecture Moderne) contributed to the rationalism theory for architecture and urban planning through 1930s to 1950s. Also, rationalism was expressed in the postmodernism architecture as neo-rationalism in Europe especially in Italian rationalism architecture in the 1960s and 1970s.

¹⁴⁰ Krufft, *A History of Architectural Theory from Vitruvius to the Present*, 297-300. Krufft described Schinkel’s shifting five phases following Peschken.

III.4 Romanticism and Counter-Enlightenment (German Romanticism, Benjamin)

The movement of romanticism is attached with the counter-movement of rationalism. Rationalism in general follows reasons as the principal source of its philosophy. While reasons appear to have originated from objective realm of thoughts and based on normative order, subjective feeling and freedom must be incorporated with our mind activities of both objective and subjective directions. Art work and architecture are generally considered in this respect. In order to be balanced in both directions, counter movement was a necessary reaction. In philosophy, the Romantic Movement emerged in the eighteenth century, even if romantic thoughts are more universal a long time ago from ancient era associated with human emotion and feeling. With this emotional basic human requirement the romanticism was against rationalism as counter-enlightenment.

Some aspect of aesthetic experience is relevant to emotional activity of mind which can be understood as romantic thoughts because such as science, which is rational, cannot provide the complete verification of art experience.¹⁴¹ The term ‘taste’ was regarded as a subjective experience that is individual ephemeral judgment of beauty, and more than individual preference.¹⁴² In the Kantian philosophy aesthetic experience is that of ‘subjective universality.’ That is “the subjectification of aesthetic” in the Kantian critique.¹⁴³ “The task of art is to provide pleasure through the apprehension of the beautiful, and activity with cannot attain any objective truth value ... which is entirely subjective.”¹⁴⁴ Therefore, in general the accepted idea of beauty is individualism thoughts which are common to all. The idea of taste in contrary does not possess this universality rather it is understood as temporal and local evaluation. By taking the extension from aesthetic experience to romantic thoughts, the positive implication of romanticism expresses the notion of ‘*free will*’ and feeling of human. This subjective

¹⁴¹ Cited in Klassen, *Architecture and Philosophy*, 94. Hans-Georg Gadamer, *Truth and Method* (New York, NY: Crossroad, 1988), xiii.

¹⁴² Solomon, *Continental Philosophy since 1750: The Rise and Fall of the Self*, 43. According to Solomon, “Kant claims that taste, while not objective (in the sense that science and morality are objective) is nevertheless more than matter of individual, subjective preference.”

¹⁴³ Klassen, *Architecture and Philosophy*, 94.

¹⁴⁴ Ibid.

universality should not be interrupted by rational reasoning beyond individual judgment. Negative connotation is that romanticism cannot be universally applicable even if more than individual preference of the idea of taste is possible. In contrast, for each individual, romanticism can be evaluated as relativism concerns or universally applicable experience has no clear demarcation. Therefore, romanticism can be thought of as a unified idea universality and locality.

The aspect of romanticism of German Idealism has been a supportive philosophical background for Romanticism in Germany.¹⁴⁵ After the French revolution of the new middle class, Bourgeoisie, Germany was facing to the need to establish own cultural revitalization. During this period, many German intellectual developments were made including Immanuel Kant (1724-1804), Georg Wilhelm Friedrich Hegel (1770-1831), Johann Gottlieb Fichte (1762-1814), Friedrich Wilhelm Joseph Schelling (1775-1854), and Johann Christoph Friedrich von Schiller (1759-1805). In Germany romanticism philosophy initially was used to promote and clarify modernism by providing the distinctive idea between classic and romanticism that comprised modern and ancient in order to seek its own cultural revitalization base on their intellectual directions that was different from that of French revolution.¹⁴⁶ However, German romanticism recognized that possibly romantic thoughts could work as criticism of new German present, which is modern while it might have a role in crystalizing social order. Thus, classicism as modern and romanticism as ancient was a combined idea and possibly “linked modern to the

¹⁴⁵ Alvin W. Gouldner, "Romanticism and Classicism: Deep Structures in Social Science," <http://www.autodidactproject.org/other/gouldner5.html>. Accessed November 8, 2012.

¹⁴⁶ Ibid. Alvin stated two major quandaries of Germany to establish own cultural revitalization: (1) “they sought to modify the social reality of German society and to create a new conception of the emerging social order more fully consistent with their own distinctive interests and assumptions,” and (2) they “were also disposed to reject the new order that revolutionary France had offered Europe.” According to Alvin, German philosophers’ development of this movement was called Romanticism. And this movement held three major cultural expressions: (1) “the philosophical idealism of Kant, Hegel, Schelling and Fichte”; (2) “*historismus* and the new historiography”; and (3) “revolution in art, aesthetics and literary criticism.”

past.”¹⁴⁷ Then, the doctrine of Romanticism in Germany became philosophical, aesthetic, and a social movement.

The effectively of romantic thoughts in Germany was brought from idealism and its successors. German Idealism required romantic imagination in order to play the role to constitute rational knowledge. Robert C. Solomon explained that Kant’s philosophy aimed to find the unity between ‘self’ and ‘world.’ Subjective mind of ‘self’ becomes “the entire subject-matter of philosophy” and “the ramification of this view constitute the transcendental pretense.”¹⁴⁸ The philosophical idea of ‘self’ become “a priori assertion that the structure of one’s mind, culture, and all humankind.”¹⁴⁹ This idea was governed and supported by rational mind simultaneously, and according to Solomon enlightenment and romanticism share the importance of ‘self,’ individualism.¹⁵⁰ In the field of philosophy German Romanticism was further developed through Idealism around 1800 after Kant. For example, Fichte developed the theory of the existence of eternal individual mind, ‘transcendental ego’ which leads us to the concept of ‘free will’ rejecting Materialism philosophy.¹⁵¹ Hegel was aware of romantic art that expresses freedom of ideal beauty in the symbolic form of classical art. Friedrich Wilhelm Joseph von Schelling (1775-1854) provided the role of inner creativity between idealism and romanticism through “philosophical justification to the Romantic theories of artistic creation.”¹⁵² The inner creativity was to be brought from the artist himself as an autonomous form. Schiller criticized Kant’s aesthetic in terms of self-determination that is ‘free will.’ Schiller’s argument was regarding the accomplishment of the subjectivity of aesthetic. “Schiller argues that Kant's ‘subjectivist’ conception of free play in aesthetic *response* has to be complemented with an ‘objectivist’ conception of

¹⁴⁷ Ibid.

¹⁴⁸ Solomon, *Continental Philosophy since 1750: The Rise and Fall of the Self*, 6.

¹⁴⁹ Ibid., 7.

¹⁵⁰ Ibid., 14.

¹⁵¹ Gelernter, *Sources of Architectural Form: A Critical History of Western Design Theory*, 195. Gelernter described that transcendental ego is “the sum total of all individual minds alive at any moment, but for Fichte it has a life greater than individual minds because it continues to exist even when finite minds come and go.”

¹⁵² Ibid., 197.

beauty.”¹⁵³ Schiller dignified autonomous ‘ideal of beauty,’ while Kant sought the unification in aesthetic with moral and beauty according to Paul Guyer.

Romanticism is associated with the dichotomy of ‘mind and body’ spirit in human activity. Objective body and subjective mind are innate in this fragmented situation. In the 1960s Theodor W. Adorno (1903-1969) criticized fragmented rational modernism in his writing, ‘*Negative Dialectic*’ (1966).¹⁵⁴ Objective knowledge of society was deeply questioned by his dialectic criticism through epistemological and ontological aspects in Kant, Hegel, and Heidegger’s philosophy. The romantic aspect of Marxist can be seen in this tendency. Major attempt of ‘Negative Dialectic’ was re-establishment of idealism “in action upon key concepts of moral philosophy (‘freedom’), philosophy of history (‘world spirit’ and ‘natural history’), and metaphysics.”¹⁵⁵ Adorno argued Kant in terms of differentiation of *noumena* and *phenomena* which provided him ‘nonidentical’ concept. This concept was used to argue Hegel’s ‘speculative identity’ which exists between object and subject, thought and being, establishing his reality between identity and nonidentity.¹⁵⁶ Lambert described Hegel’s dialectic was turned to ‘negative’ dialectic. According to Klassen, “critics of Marxist orientation seek to free man from [bureaucratic] oppressive forces through a fresh approach to the phenomenon of art and its relation to society.”¹⁵⁷ Critical aesthetic philosophy at Frankfurt School played the certain role of romanticism in terms of freedom theoretically. Walter Benjamin (1892-1940) influenced Adorno on human inner desire of freedom.

The romantic aspect of Benjamin was seen in Adorno’s ‘Aesthetic Theory’ which carried ‘modern art’ and philosophy of aesthetic. Benjamin as the one of the origin of Adorno’s Romanticism can be summarized following Benjamin’s inclination toward

¹⁵³ Paul Guyer, "18th Century German Aesthetics," in *The Stanford Encyclopedia of Philosophy* ed. Edward N Zalta (Fall 2008 Edition). Accessed November 11, 2012, <http://plato.stanford.edu/entries/aesthetics-18th-german/#SchResKanAesGraDigAesEdu>.

¹⁵⁴ Theodor W. Adorno, *Negative Dialectics*, trans. E. B. Ashton (New York, NY: Continuum Publishing Company, 1983).

¹⁵⁵ Lambert Zuidervaart, "Theodor W. Adorno," in *The Stanford Encyclopedia of Philosophy* (Winter 2011 Edition). Accessed November 11, 2012, <http://plato.stanford.edu/entries/adorno/>.

¹⁵⁶ Ibid.

¹⁵⁷ Klassen, *Architecture and Philosophy*, 33.

romantic thoughts through aesthetic philosophy. The contribution of Benjamin was made with “materialist aesthetic theory proved an important stimulus for both the Frankfurt School of Critical Theory and the Marxist poet and dramatist Bertolt Brecht.”¹⁵⁸ Benjamin expressed Romanticism aspects through his doctoral dissertation, “*Concept of Art Criticism in German Romanticism*.” He argued “the philosophical relationship between the idea of art and particular artworks posited in Romantic aesthetics must be understood in relation to Fichte's theory of reflection.”¹⁵⁹ Matthew Charles explained therefore, his root must be traced from German Romanticism. His influence reached to the recent intellects including Jürgen Habermas and Jacques Derrida. Benjamin’s theory on language is essential to conceptualize our nature, all our subject and object experience and perception in our world made up because of language. There “is no event or thing in either animate or inanimate nature that does not in some way partake of language...”¹⁶⁰ And, the function of language is to serve “as a medium of experience.”¹⁶¹ Benjamin approached an alternative way to theorize Neo-Kantian philosophy through critic of Kant and reformulating Kant’s architectonic according to Matthew Charles. Benjamin developed his philosophy on ‘art work’ and its ‘true contents’ through critic on theories of the relationship between German Romanticism and Goethe’s thoughts, conception of aesthetic judgment. German Romanticism involvement was seen through both German Idealism and the connection to materialism through the Frankfurt School such as Benjamin and Adorno.

The combination of classicism and romanticism of philosophy in Germany effectively influenced architecture. In architecture, Henry-Hitchcock called Romantic Classicism around 1800 in Europe.¹⁶² The influence of Romantic Classicism came to the nineteenth

¹⁵⁸ Peter Osborne and Matthew Charles, "Walter Benjamin," in *The Stanford Encyclopedia of Philosophy* ed. Edward N Zalta (Winter 2012 Edition). Accessed November 1, 2012, <http://plato.stanford.edu/entries/benjamin/#RomGoeCri>.

¹⁵⁹ Ibid. Matthew explained “Fichte’s reflection indicates the free activity of consciousness.”

¹⁶⁰ Ibid.

¹⁶¹ Ibid.

¹⁶² Henry-Russell Hitchcock, *Architecture: Nineteenth and Twentieth Centuries* (New Haven, CT: Yale University Press, 1977), 13. Term “Romantic Classicism” is called specifically for the architectural style

century for Gothic revival. With the extension of this influence *the Arts and Crafts Movement* in England was one of the major trends in source of modern architecture. Augustus Welby Northmore Pugin (1812-1852) thought Gothic style is the one that satisfy his theoretical principle of 'Christian Architecture' which has inclination of romanticism and simultaneously positivist view as well. His value of Gothic influenced John Ruskin who further developed romanticism in his writing, '*The Seven Lamps of Architecture*.' Pugin and Ruskin's influence on William Morris activities finally became the Arts and Craft Movement at the end of the nineteenth century. After Morris' romantic affection Richard Norman Shaw (1831-1912), Charles Robert Ashbee (1863-1942), and Charles Rennie Mackintosh (1868-1928) made further craftsmanship design development. As a counter romanticism Geoffrey Scott (1884-1929) called as 'Romantic fallacy' in his writing of '*The Architecture of Humanity*.'¹⁶³ The idea of romanticism was not practical, rather was poetical which was evaluated by him as a wrong approach.¹⁶⁴ In Germany under the influence of *Romantic Classicism* Karl Schinkel (1781-1841) was the representative architecture of classicism. "Schinkel was not only a Neo-Classist, but also a Romanticist."¹⁶⁵ Although at the age of high modernism, Mies van der Rohe (1886-1969) expressed International Style with steel and glass, he was originally influenced by Schinkel's Romantic Classicism. And, Mies was a romanticist with the influence of Glass Chain, Bruno Taut's (1880-1938) romantic activity and movement. In his later works, Mies' affiliation with romanticism was expressed with the symmetrical form, for example, at Illinois Institute of Technology campus design (presentation plan 1942/46¹⁶⁶) and New National Gallery in Berlin (1962-1968). With relation to postmodernism architecture, the use of classical architectural vocabulary is associated with romanticism aspect naively. For example, this can be seen through Philip

between 1750 -1790. But style inherited in early 19th century in Europe according to Henry-Russell Hitchcock.

¹⁶³ Geoffrey Scott, *The Architecture of Humanism: A Study in the History of Taste* (New York, NY: W.W. Norton & Company, 1999 (1969)), 40-59.

¹⁶⁴ Klassen, *Architecture and Philosophy*, 40.

¹⁶⁵ *Ibid.*, 148.

¹⁶⁶ Phyllis Lambert, "Mies Immersion," in *Mies in America*, ed. Phyllis Lambert (New York, NY: Harry N. Abrams, Inc., 2001), 269.

Johnson's (1906-2005) work in AT&T Tower (completed in 1984).¹⁶⁷ According to Klassen, "if Neo-Classicism can be interpreted as Idealism by critics like Eisenman, Romanticism may be considered the realist counterpart." Postmodern historicism in general can be a sort of romanticism reflection on architecture.

III.5 Existentialism (Nietzsche, Heidegger)

After Kantian Idealism, the intellectual development in Germany diversified by reaching to Hermeneutic, Phenomenology, and Existentialism. While scientific philosophy continued to develop rationalism aspect, those were more in a sense toward irrational development against the idea of Enlightenment. The earlier period of Existentialism may be represented by Friedrich Nietzsche (1844-1900), and the later period by Martin Heidegger (1889-1976), while Jean-Paul Sartre (1905-1980) was considered a founder. The value shifting towards individualism and idea of self both with affirmative and negative was one of the significant movements in enlightenment and romanticism for both the process of modernity. Nietzsche's philosophy was synchronized to this trend including his criticism on self (the aspect of moral philosophy); perhaps it includes 'nihilism.' He sought post-Christian era by declaring the death of God, disproving the existence of God. He criticized the absolutist worldview as '*perspectivism*,' that is his word, in order to negate the concept of modern 'truth' and 'moral,' and he was described by Heidegger as 'the last of metaphysician.'¹⁶⁸ Nietzsche's concept of attacking modern concept of 'self' was stemmed from his own moral concept which was a "radical critique of metaphysics, unity of self, and of truth."¹⁶⁹

In terms of Nietzsche's creative aspect of philosophy, his desire can be represented by his notion of "the will to power." His notion shows the aligned tendency with romanticism thoughts with the inclination toward both heroic and tragedy aspect of ancient Greek thoughts and influenced by Schopenhauer's romanticism; his reaction to

¹⁶⁷ Klassen, *Architecture and Philosophy*, 148.

¹⁶⁸ Solomon, *Continental Philosophy since 1750: The Rise and Fall of the Self*, 111.

¹⁶⁹ See Cahoon's comment on Friedrich Nietzsche. Cahoon, *From Modernism to Postmodernism an Anthology*, 109.

enlightenment guided him to criticize Kant and Rousseau.¹⁷⁰ For example, the notion of *a priori*, a foundation of knowledge was not comparable to need of survival for Nietzsche; knowledge was less important than “instrument of survival.”¹⁷¹ His philosophy uplifted controversial simultaneity in aesthetic and moral philosophy. He found the Greek tragedy was essential for aesthetic which was described in his writing, ‘*The Birth of Tragedy*.’¹⁷² His notion of ‘*nihilism*’ was radical criticism in religion, morality, and aesthetic of modern society, being as “a despair and resentment that covers itself with grand illusion.”¹⁷³ He held the tensions between oppositions somehow with diagonal direction. Therefore, he needed to overcome all his contradiction that was represented with his notion of “the will to power.” ‘*Will*’ exists behind all things and become ‘truth’ similar to Heidegger’s notion of ‘*Being*.’ For Nietzsche this truth is necessary to sustain one’s life for survival, and “this world is the will to power and nothing beside”¹⁷⁴ as ontological foundation.

Although the relation to Martin Heidegger philosophy can be beyond Existentialism philosophy such as Hermeneutics and Phenomenology, in this section I am focusing on existentialism by comparison with that of Nietzsche. Heidegger was a student of phenomenologist Husserl, but his philosophy was different form his teacher Husserl in terms of his view regarding the *transcendental consciousness*. Michael Wheeler described transcendental consciousness as “the irreducible thinking ego or subject that makes possible objective inquiry.”¹⁷⁵ While Husserl focused on perception and judgment through *intentionality*, Heidegger further transformed this to the essential ontological problem that is precondition of beings in his representative writing, ‘*Being and Time*.’¹⁷⁶

¹⁷⁰ Solomon, *Continental Philosophy since 1750: The Rise and Fall of the Self*, 112-14.

¹⁷¹ *Ibid.*, 113.

¹⁷² *Ibid.*, 114.

¹⁷³ *Ibid.*, 115.

¹⁷⁴ Friedrich Nietzsche, "The Dionysian World," in *From Modernism to Postmodernism an Anthology*, ed. Lawrence Cahoon (Malden, MA: Blackwell, 2003), 117. Nietzsche described his world as Dionysian world which is self-created and self-destroying mysterious world with two folds oppositions.

¹⁷⁵ Michael Wheeler, "Martin Heidegger," in *The Stanford Encyclopedia of Philosophy* ed. Edward N Zalta (Spring 2013 Edition). Accessed November 16, 2012, <http://plato.stanford.edu/entries/heidegger/>.

¹⁷⁶ Heidegger, *Being and Time*.

According to Michael Wheeler “Husserlian intentionality (a consciousness of objects)” was replaced with ‘*Dasein*,’ which is the etymological meaning of ‘being there,’ “by the concept of *care* or *Being-in-the-world* (a non-intentional, or perhaps pre-intentional, openness to a world).”¹⁷⁷ The *Dasein* is the fundamental ontological concept of ‘Being’ which has transcendental existence to lead many beings which are existing entities. Thus, *Dasein* can be understood as the fundamental *a priori* condition of many beings to be intelligible entities. *Dasein* has potentiality to be understood as many ways holding openness and possibility. Through phenomenology adapted by Heidegger, *Dasein* became a method to investigate objects which is framed as perception and experience like Husserl’s phenomenology.¹⁷⁸ However, Heidegger’s phenomenology sought beyond the aspects of transcendental consciousness. Michael Wheeler explains that Heidegger’s phenomenology set goals “to deliver an interpretation of Being, an interpretation that, on the one hand, is guided by certain historically embedded way of thinking.” It leads his *Dasein* concept to Hermeneutic which interpret beings for *Dasein*, “preontological understanding of Being.”¹⁷⁹ Since *Dasein* holds openness possibility hermeneutics interpretive circle is aligned with the concept of *Dasein*.

Heidegger’s ontological foundation is ‘Being-in-the-world’ which consists of pre-existing and non-intentional things which stems from his philosophy and language named ‘*Dasein*’ reflecting the meaning of ‘Being.’ The spatial concept of ‘Being-in-the-world’ may be explained as the metaphysical hyper-spatial relations of beings (entities) sustained by ‘Being.’ Heidegger invented another term called ‘dwelling’ “to capture the distinctive manner in which *Dasein* is in the world.”¹⁸⁰ The concept of dwelling is associated with the cultural and daily ‘involvement’ which consists of ‘in-ness’ network within *Dasein* mode. The world is made of such ‘involvement’ in order to make sense Heidegger’s holistic network including culturally embedded daily activities and the departure from them. This spatial concept of *Dasein* can be seen in the notion of

¹⁷⁷ Wheeler, "Martin Heidegger."

¹⁷⁸ Ibid.

¹⁷⁹ Ibid.

¹⁸⁰ Ibid.

‘dwelling’ and ‘de-severance.’ The concept of ‘de-severance’ is associated with the scale shifting that makes “the remoteness of something disappear, bring it close” in order to have “the farness vanish.”¹⁸¹ The concept of Dasein remained as *a priori* transcendental condition, but at the same time the shifting structure in the concept of dwelling and de-severance shaped up dynamic relation subjective-objective mind interaction at deep level of our experience and interpretation within the context of history and location. And in the late period, the concept of ‘dwelling’ was focused on in order to uplift and unfold ‘Being.’ ‘Dwelling’ is a home and place where we have ‘*time bound process.*’ The subjective *being* as *Being* involves this process. Being has now transmuted to the fourfold oneness, ‘*earth-sky-divinity-mortal.*’

In the later work Heidegger’s work dealt with the disappearance of subjectivity in Dasein and Being in his work, ‘Letter on Humanism (1947).’ Although once Heidegger rejected subjectivism and anthropocentric characteristics of modern thought and “his philosophy subsequently moved in an increasingly anti-humanist direction,”¹⁸² his philosophy recovered the humanism by insisting “a true humanism, which can arise only when we abandon traditional philosophical thinking.”¹⁸³ French philosopher Jean-Paul Sartre was in accord this alignment. The naming of ‘existentialism’ was done by him. However later, contrarily Sartre’s excessive subjectivism was rejected by Heidegger and Postmodern philosophy in later.¹⁸⁴ Sartre valued existentialism with subjective freedom which is caused by *a priori* situation in order to continue the freedom process of human subjectivity. His idea of ‘identity’ worked as the key concept as *a priori* existence, which is neither as culture nor natural factor, influences the process to shape next existence, human subjectivity. For Sartre through the idea of Identity, “key existential notions such as facticity, transcendence (project), alienation, and authenticity must be

¹⁸¹ Ibid.

¹⁸² See Cahoon’s comment on Martin Heidegger. Cahoon, *From Modernism to Postmodernism an Anthology*, 174.

¹⁸³ Ibid.

¹⁸⁴ See Cahoon’s comment on Jaen-Paul Sartre. Ibid., 169.

understood.”¹⁸⁵ Steven Crowell explains the notion of facticity includes all properties that are determined by others regarding me, that is “third-person investigation.”¹⁸⁶ Transcendence is associated with one’s attitude toward own characteristics of their “practical engagement in the world.”¹⁸⁷ Both facticity and transcendence are irreducible for the formation of self-identity according to Crowell. He characterized the notion of alienation that is “the estrangement of the self both from the world and from itself,” and Heidegger’s term ‘uncanny’ is relevant to this unfamiliarity toward the cosmos (home-feeling) in order to establish meaning in the world through identity.¹⁸⁸ The notion of freedom is reflected with the notion of authenticity. Because of the possible connection of freedom and authenticity, “existentialism's focus on authenticity leads to a distinctive stance toward ethics and value-theory generally.”¹⁸⁹ Therefore, for Sartre the consciousness on freedom of self must be maintained as the matter of given, *a priori* in the situation that the self is continuously engaged. The desires of freedom with the connection of philosophical materialism led Sartre toward Marxism in the 1960s.

The principal essence of Sartre’s existentialism can be understood in his writing, ‘Existentialism.’¹⁹⁰ Sartre explained we are in a ‘situation’ continuously, and this process of self with identity is the origin of existentialist. Human subjectivity comes at first for existentialism and “it is impossible for man to transcend human subjectivity.”¹⁹¹ Sartre focused on humanism as the critical element for existentialism because “there is no universe other than human universe, the universe of human subjectivity.”¹⁹² He called this “existentialism humanism.”¹⁹³ Then, Existentialism moved to Albert Camus (1913-

¹⁸⁵ Steven Crowell, "Existentialism," in *The Stanford Encyclopedia of Philosophy* (Winter 2010 Edition). Accessed November 22, 2012, <http://plato.stanford.edu/entries/existentialism/>.

¹⁸⁶ Ibid.

¹⁸⁷ Ibid.

¹⁸⁸ Ibid.

¹⁸⁹ Ibid.

¹⁹⁰ Jean-Paul Sartre, "From "Existentialism"," in *From Modernism to Postmodernism an Anthology*, ed. Lawrence Cahoon (Malden, MA: Blackwell, 2003), 169-73.

¹⁹¹ Ibid., 169.

¹⁹² Ibid., 173.

¹⁹³ Ibid.

1960) and finally influenced post-structuralism philosophy such as Michel Foucault (1926-1984) and Jacques Derrida (1930-2004).

The influence to architecture from existentialism philosophy can be seen from the process in development of modernism architecture through postmodernism architecture that includes theoretical background of post-structuralism, Deconstructivist style. While Nietzsche's philosophy seems to have influenced Modernism through his *nihilism* and *will to form*—the desire to express, they are also connected to Postmodernism, specifically for Deconstructivist architecture. In the philosophy, “Nietzsche is the godfather of postmodernism.”¹⁹⁴ Phenomenology and Existentialism philosophy constituted Norberg-Schulz's theory of architecture following Heidegger's notion of *Being and Dwelling* with anti-Euclidean spatial perception that constitutes a space time continuum. In the twentieth century, these two aspects of the oscillation between rationalism and romanticism diversified their influence on architecture along with the development of existential, phenomenology philosophy as oppose to empirical, positivist philosophy. In the 1960s, these shifts discontinued the utopianism of modernism.¹⁹⁵ Architectural problem of modernism based on Sartre was targeted by that of Heidegger in the postmodernism era.¹⁹⁶

III.6 Positivism (Logical Empiricism, Analytic linguistics, Wittgenstein, Quine, and Putman)

The legacy of the rationalism in enlightenment was taken over by positivist philosophy. We can see this origin in such philosophers as Saint-Simon (1760-1825) who termed positivism and his follower Auguste Comte (1798-1857) who set the goal of society to be ‘positivist stage’ through ‘theological and metaphysical stage’ in the nineteenth

¹⁹⁴ See Cahoon's Introduction to Part II. Cahoon, *From Modernism to Postmodernism an Anthology*, 86.

¹⁹⁵ In France, movement of 1960s was post-structuralism. This movement denied realist, objective knowledge. In philosophy postmodern means post-structuralism that made this shift in the 1960s. See *ibid.* 1-2.

¹⁹⁶ For example, While Norberg-Schulz theorized his architectural theory on Heidegger and opposed modernism architecture, in philosophy “Sartre's existentialism was an important mid-century response to the problem of modern alienation, and a prime target for Heidegger.” See *ibid.* 86.

century.¹⁹⁷ The development was inherited by an analytic linguistics philosopher Ludwig Wittgenstein (1889-1951), a logical positivist Rudolf Carnap (1891-1970), a ‘critical-rationalist’ Karl Popper (1902-1994), a representative logician Kurt Gödel (1906-1978), and a logician who opposed logical empiricism W.V.O. Quine (1908-2000) in the twentieth century. Logical positivism is closely overlapped with logical Empiricism movement which was popularized during 1920s-1930s in Europe and 1940s-1950s in the U.S. This movement has a wide range of doctrines such as logic and mathematics and shares with pragmatism in terms of the scientific thoughts and methodology. The difference between logical empiricism and logical positivism is not simply distinguishable. According to Richard Creath, logical empiricism is a wider term than logical positivism. The group associated with the Berlin Society of Empirical Philosophy is never called as ‘logical positivist,’ while the members of Vienna Circle differentiate themselves from ‘logical positivist.’ But, this differentiation is as the caution that their own view’s difference concerning ‘positivist view’ of the nineteenth century.¹⁹⁸ According to Creath the movement was clearly over by 1970 after a fruitful period in the 1950s. In the U.S. logical empiricism had close relations with American Pragmatism through such as Charles Morris (1901-1979) and Hilary Putman (born 1936). The logical empiricism shared with American Pragmatist “a common concern for empirical methodology in the service of social reform” and “had strong pragmatist components.”¹⁹⁹ Logical empiricism departing from science, established its own domain, the philosophic question of logical empiricism focused on the availability of its domain “that philosophy could call its own.”²⁰⁰ For example, Carnap provided its answer with the elimination of ‘metaphysics.’ Logical empiricism holds anti-metaphysical tradition of nineteenth century enlightenment as well as that of Kantian philosophy. Carnap made

¹⁹⁷ Reese, s.v. "Comte, Auguste."

¹⁹⁸ Richard Creath, "Logical Empiricism," in *The Stanford Encyclopedia of Philosophy* ed. Edward N Zalta (Spring 2013 Edition). Accessed November 23, 2012, <http://plato.stanford.edu/entries/logical-empiricism/>. According to Creath logical empiricist has three groups: (1) the Vienna Circle, (2) Berlin Society for Empirical Philosophy (later called the Berlin Society for Scientific Philosophy), and (3) others who shared their intellectual relations with former two groups.

¹⁹⁹ Ibid.

²⁰⁰ Ibid.

contribution to current arena of logical empiricism philosophy is still vital regarding the probability theory. How philosophy influenced or developed sciences was targeted as the further philosophic question whether logical empiricism addressed the developments in the sciences themselves for the rising fields of Einstein's non-Euclidian geometries, relativity theory of physics.²⁰¹ One of the major characteristics of this philosophy uses literary logic as tool. As an example, Wittgenstein represents how logic was stated centrally with his early period writing, '*Tractatus Logico-philosophicus*'²⁰² The world is made by logic and this mode "integrate into an overall empirical theory of the world."²⁰³ The central issues of logical empiricism are refutation of metaphysics and liability on logic and mathematics.

Ludwig Wittgenstein's earlier writing, '*The Tractatus Logico-philosophicus*' (1992 English translation) addressed "the central problems of philosophy which deal with the world, thought and language, and present a 'solution' ... of these problems which is grounded in logic and it the nature of representation."²⁰⁴ Although, he shifted this approach to the difficulty and problems of the ordinal language against the logical determinism of language in his later writing, '*Philosophical Investigation* (1953),'²⁰⁵ *The Tractatus* made significant influence on logical empiricists of Vienna Circle members. In the *Tractatus*, language was composed of thought and proposition which utilized pictures as structure. Language was divided to sensual language and that of nonsense. For sensual language he provided two structures as conditions: "First, the structure of the proposition must conform with the constraints of logical form, and second, the elements of the proposition must have reference."²⁰⁶ His logic for proposition is based on bi-polar system, a truth table of true and false. He categorized nonsense language which is

²⁰¹ Ibid.

²⁰² Ludwig Wittgenstein, *Tractatus Logico-Philosophicus*, trans. C. K. Ogden (New York, NY: Dover Publications, 1998).

²⁰³ Creath, "Logical Empiricism."

²⁰⁴ Anat Biletzki and Anat Matar, "Ludwig Wittgenstein," in *The Stanford Encyclopedia of Philosophy* ed. Edward N Zalta (Summer 2011 Edition). Accessed November 25, 2012, <http://plato.stanford.edu/entries/wittgenstein/>.

²⁰⁵ Ludwig Wittgenstein, *Philosophical Investigations*, trans. G.E.M. Anscombe (Oxford, UK: Blackwell, 1999 (1953)).

²⁰⁶ Biletzki and Matar, "Ludwig Wittgenstein."

unsayable such as metaphysical, ethical, and aesthetic proposition. His logical format of the *Tractatus* was constructed in order to determine language analytically. His approach is that our world consists of thoughts which are language. In his later work he criticized his own logic of *Tractatus* shifting his philosophical position to be open to the non-determinable aspects of language in '*Philosophical Investigation*.'

Rudolf Carnap (1891-1970) contributed to logic and philosophy of language. "He rejected metaphysics as meaningless because metaphysical statement cannot be proved or disproved by experience."²⁰⁷ Carnap was a member of the Vienna Circle and one of the leaders. "He defended logical and methodological pluralism and worked to develop an epistemic approach to probability."²⁰⁸ His anti-metaphysical feature can be considered through his representative articles, 'Pseudo-problems in philosophy (1928),'²⁰⁹ and 'Elimination of metaphysics through logical analysis of language (1932).'²¹⁰ "Metaphysical statements are rejected as meaningless, since they cannot be empirically confirmed or refuted."²¹¹ Carnap made significant contributions to the philosophy language in the area of formal semantics with *Meaning and Necessity* (1947), for the philosophy of science with *Logical Foundation of Probability* (1950).²¹²

Kurt Gödel (1906-1978) was a member of Vienna Circle and his principle work, his article in 1931, "*On formally undecidable proposition*" in *Principia Mathematica* and related systems' was considered to be the "best known for his spectacular incompleteness theorems, and his Platonist orientation toward mathematics."²¹³ His theorem takes "formal system consists of axiom and a range of rules whereby theorems

²⁰⁷ Mauro Murzi, "Rudolf Carnap," in *Internet Encyclopedia of Philosophy* (April 12, 2001). Accessed November 25, 2012, <http://www.iep.utm.edu/carnap/>.

²⁰⁸ Creath, "Logical Empiricism."

²⁰⁹ Rudolf Carnap, "Pseudoproblems in Philosophy," in *The Logical Structure of the World and Pseudoproblems in Philosophy (Open Court Classics)* (Open Court, 2003).

²¹⁰ "The Elimination of Metaphysics through Logical Analysis of Language," in *Logical Empiricism at Its Peak: Schlick, Carnap, and Neurath*, ed. Sahotra Sarkar (New York, NY: Garland Pub., 1996), 10-31.

²¹¹ Tomas Mautner, in *A Dictionary of Philosophy* (Oxford, UK: Blackwell Publisher, 1996), s.v.

"Carnap."

²¹² Ibid.

²¹³ Creath, "Logical Empiricism."

can be derived from the axiom in a purely formal fashion.”²¹⁴ Gödel’s formal system is explained: “The theorem asserts that every formal arithmetic is incomplete in the sense that there exists a sentence (in the language of the first order predicate calculus) which expresses an arithmetical truth.”²¹⁵ However, it is considered to be not provable within the system. In some ways, his theory is controversial and challengeable for some philosopher such as David Hilbert²¹⁶ (1862-1943) in the purely syntactical aspect. Perhaps Gödel is influencing on the desire of positivists and empiricists to find logical ‘truth’ even if it is contradictory.

W.V.O. Quine (1908-2000) argued against logical empiricist regarding the dichotomy of analytic and synthetic framework in his visiting to Vienna Circle, and in his article, *Two Dogmas of Empiricism* (1951). His theory was developed by accepting behaviorist stand point. But he undermined the duality of epistemological structure. He described this point on his writing, ‘*Epistemology Naturalized*.’ Regarding truth his view for ‘*analytic truths*’ is that “propositions made true by their meanings alone,” and for ‘*synthetic truths*’ the need of “supra-linguistic evidence.”²¹⁷ He argued this distinction is illusion in his article, *Two Dogmas of Empiricism*.²¹⁸ His argument regarding justification demonstrated that “the program of seeking a rational justification of inquiry is unachievable, opting instead for a ‘naturalist epistemology’ which accepts that how we know is best described a scientific account of human perception and cognition.”²¹⁹ He was influenced by Carnap²²⁰ and possibly Gödel’s philosophy as well. Although Quine had some disagreement with Carnap’s analytical stance, he maintained the influence

²¹⁴ Mautner, s.v. "Gödel's Theorem."

²¹⁵ Ibid.

²¹⁶ Ibid. The current philosophers who are challenging Gödel’s controversial Theorem are named such as Hilbert and other formalists. The formalist involved because theory’s “class of arithmetical truths can be circumscribed purely syntactically and the notion of arithmetical truth can therefore be supplanted by that of derivability in formal system.”

²¹⁷ See Cahoon’s comment on Quine. Cahoon, *From Modernism to Postmodernism an Anthology*, 540.

²¹⁸ W. V. Quine, "Epistemology Naturalized," in *From Modernism to Postmodernism an Anthology*, ed. Lawrence Cahoon (Malden, MA: Blackwell, 2003), 547, note xiv. Quine’s denial of this distinction is stated.

²¹⁹ Cahoon, *From Modernism to Postmodernism an Anthology*, 540.

²²⁰ Creath, "Logical Empiricism." Creath named Carnap who influenced Quine such that “he was a disciple of Carnap's and even after they began to disagree,”

from Carnap.²²¹ Concerning the difference of knowledge between logic and mathematics, Quine described that Gödel's work showed "no consistent axiom system can cover mathematics even when we renounce self-evidence."²²² According to him, mathematics was held as his chief philosophical principle, although the axiom based on mathematical reduction has limitation to reveal the mathematical knowledge in the depth. He argued that the truth of knowledge cannot be achieved by the system of reduction, and developed his arguments of the essence of epistemology between *logic* and *set theory*. Quine held the holistic view of meaningfulness rejecting atomism reduction. His idea of *indeterminacy of translation* was developed through Carnap's notion of *translational reduction* represented his intention of holistic and linguistic approach in order to obtain truth from inter-subjective scientific observation in conjunction with logic and set theory. He described his consideration of linguistics and pragmatics through Charles Sanders Peirce in his writing, *Epistemology Naturalized*.²²³ Quine's argument was against atomism of positivist view, but it is considered to be a part of logical empiricism philosophy.

Architecture with the development of science and technology was realized functionalism architecture and modernism architecture. Utopianism and humanism architecture was influenced by the positively from philosophy of science and logical empiricism. In the nineteenth century architectural rationalism in terms of structure and Gothic revivalism was influenced by universal view and logic. This view aimed to construct ideal architecture under the specification of rational mind and materials. In the twentieth century Bauhaus movement was supported by the functional beauty which should be universally provided the values of functional aesthetics. Scientific methodology and logical empiricism provided architecture to be standardized meaningfulness regardless the difference of context in terms of culture and geography. Architecture was reduced to the component of 'built environment' to be analyzed scientifically. This influence was

²²¹ Ibid.

²²² Quine, "Epistemology Naturalized," 541.

²²³ Ibid.

strongly condemned utopianism of architecture through International style of architecture until 1970s. In part structuralism philosophy extended new version of rationalism and influenced on architecture in 1960s and 1970s.

III.7 Phenomenology (Husserl, Heidegger, Merleau-Ponty)

The development of Phenomenology from empiricism philosophy made fruitful manifestation of philosophy in Edmund Husserl (1859-1938), Martin Heidegger (1889-1976), and Maurice Merleau-Ponty (1908-1961). Phenomenology became an addition to the basic categories of philosophy which includes ontology, epistemology, logic, and ethics. The general idea of phenomenology is to study the consciousness of perception. The study through phenomenology therefore involves all kinds of human experience with mind and body. Husserl was influenced by logician Bernard Bolzano (1781–1848) and developed his notion of ‘*intentionality*’ by analyzing propositional sentence with the relation to the consciousness.²²⁴ Since human perception does not cover all perceptual objects for a perceiver, a perceiver’s intentional selection has to be involved for the cognitive process of perceiving. He emphasized his theory for the subjective and inter-subjective consciousness of surroundings. Heidegger was also known as an existentialism philosopher who concerned ontological aspect of phenomenology. His notion of ‘*Being*’ was central foundation of his philosophy. His existential phenomenology sought the meaning of being, thus became an interpretation of existence. This direction was extended to the issue of interpretation that made the connection to Hermeneutics philosopher such as Gadamer and Habermas. Merleau-Ponty guided phenomenology to *experimental psychology*. Subjective experience of perceptual result of mind-body oneness is needed to be analyzed with this direction of ramification.

²²⁴ Christian Beyer, "Edmund Husserl," in *The Stanford Encyclopedia of Philosophy* ed. Edward N Zalta (Winter 2011 Edition). Accessed December 1, 2012, <http://plato.stanford.edu/archives/win2011/entries/husserl/>. Beyer stated Husserl’s interest to develop a general referential theory following Bolzano can be seen in his writing, *Logical Investigations*. Along with the philosophy of John Stuart Mill he studied propositional system.

Husserl challenged rationalism that is the empiricist preconception of logic and science. He valued phenomenological movement and sought the transcendental knowledge in the consciousness of human perception. At the logical base Husserl's linguistic analysis of proposition required the method of *unit of consciousness* which formed the notion of *intentionality* and the phenomenological description. He followed Brentano's theory that explained consciousness is *intentional*.²²⁵ This process of perception needs 'brackets' which consists of perceptual content called by him *noema* regardless these perceptual object exists or not. In this system cognitive process is *bracketed* as "his belief in the existence of the perceptual object." In his earlier major writing, *Logical Investigation* (1901) he developed new account of logic with anti-psychologistics, which is explained: "the laws of logic and mathematics are not empirical laws of logic."²²⁶ The method of 'bracket' followed this writing then he developed the notion of *phenomenological reduction* that identifies the essential component of phenomenon that satisfies the objective reality of perceptual experience. His refinement called *transcendental phenomenology* dealt with the notion of *intersubjective* experience and sought the possible transcendental knowledge that can be represented by empathy. Husserl's *transcendental phenomenology* is the main source of 'intersubjectivity' that allows subjective consciousness to be reconstructed as objective existences of phenomenology within whole experience involves the process of empathy. Our cognitive experience can be shared within a community. In Husserl's system he purposed this sharing consciousness must be structured in ordinary life, whereas phenomenologist can develop the essential cognitive system above daily life level. In his later major writing, *Ideas* (1913), he explained: "on the realm of intentional consciousness is supposed to enable the phenomenologist to develop a radically unprejudiced justification"²²⁷ of phenomenologist's view that can be interconnected with our world. This idealism showed fundamental characteristics of Husserl's phenomenology.

²²⁵ Mautner, s.v. "Husserl."

²²⁶ Ibid.

²²⁷ Beyer, "Edmund Husserl."

The foundation of Heidegger's phenomenology is the question of meaningfulness of ontology. For Heidegger "phenomenology is not just transcendental" and he valued as *hermeneutic* kind. He aimed "to deliver an *interpretation* of Being."²²⁸ The origin of his philosophy came from the concept of *Dasein*, which means 'being there' in German. Heidegger was focused on his phenomenology on the extreme subjectivity yet non-subjectivity in a sense. As opposed to Husserl's *intentionality*, his approach is finding the non-intentional existence which is *a priori*. He made an underpinning of this concept in the meaning of 'Dwelling.' Thorough non-subjective existence of 'Being,' Phenomenology aspect of Heidegger's role was to interpret whole experience in order to understand the meaning within a set context, time and location. In a sense phenomenology was 'means' of this purpose of Heidegger. The concept of 'Dasein' requires non-subjective interpretation that exists *a priori* in a context in order to appropriate this mind setting to perceive many beings that reflect to formulate 'Being' cyclically. Heidegger's consciousness of 'beings' and the existence of 'Being' has reciprocal relationship in a sense. Other words, 'being' as entity has to be the necessary condition of 'Being,' and 'Being' is the foundation of consciousness of many 'beings.' The consciousness of 'being' becomes consciousness of self rather than consciousness of perceptual object, yet this consciousness process is non-subjective because of pre-existing 'Dasein.' Whole experience of 'Dasein' has to be proceeded as particular kind of existence in the center of 'Dwelling.' In the center of 'Dwelling,' our subjectivity and objectivity will have no difference. This feeling was called 'de-severance' that shifts our conscious to the reality of remoteness. Compared to Husserl's notion of *intentionality*, Heidegger's phenomenology emphasized the value of non-intentional depth, which also has ultimately aimed to reach some special understanding of subjectivity that constitutes our foundation of knowledge, primordial experience.

Merleau-Ponty like Husserl attempted to establish *phenomenological understanding* and describe pure perceptual experience. According to him "phenomenology is only

²²⁸ Wheeler, "Martin Heidegger."

accessible to a Phenomenological Method.”²²⁹ He tried to overcome the dichotomy of perception, which is consciousness of self, and others by centering self, which is *cogito*, but it is operative through mind-body oneness. The experience and role of body is valued for his operation rejecting associative psychology and intellectualist psychology according to Woodruff.²³⁰ Merleau-Ponty was not a rationalist. He was rather an idealist who appreciated methodology of phenomenological reduction following Husserl. Idealism in the phenomenological world at some degree combined subjectivity and objectivity, and is not separated from the recognition of subjectivity and *intersubjectivity*.²³¹ He took his position between behaviorism and rationalism and focused on the ‘body image’ which is developed from the extension of Husserl’s notion of ‘lived body.’ He avoided the dichotomy of Cartesian philosophy, mind and body separation. Receiving Hegelian influence, Merleau-Ponty’s notion of ‘third dialectic’ was explained similarly as “tied neither to a fact, nor to a delineated type of situation, it institutes a domain of culture in which the object is in no immediate sense related to a biological function.”²³² The way to conceive Gestalt is to take “unity of both nature and idea.” Then, signification must be embodied in the intractable relationship between them. Therefore, Merleau-Ponty’s system, nature and idea are unified as one like body and mind are one. Regarding the judgment of phenomenological experience, he was against Kantian thought which is called ‘Categories of Judgment’; instead he followed and developed the notion of ‘phenomenological reduction.’ For language theory Merleau-Ponty transformed Ferdinand de Saussure’s theory and emphasized ‘primordial level language’ to be analyzed. But his language theory led ontological aspects closer to

²²⁹ Merleau-Ponty, *Phenomenology and Perception*, trans. Taylor Carman (New York, NY: Routledge, 2012), Ixxi.

²³⁰ David Woodruff Smith, "Phenomenology," in *The Stanford Encyclopedia of Philosophy* ed. Edward N Zalta (Fall 2011 Edition). Accessed December 9, 2012, <http://plato.stanford.edu/entries/phenomenology/>. Woodruff described associationist psychology “focused on correlations between sensation and stimulus,” and intellectualist psychology “focused on rational construction of the world in the mind.”

²³¹ Merleau-Ponty, *Phenomenology and Perception*, Ixxxiv-Ixxxv.

²³² Bernard Flynn, "Maurice Merleau-Ponty," in *The Stanford Encyclopedia of Philosophy* ed. Edward N Zalta (Fall 2011 Edition). Accessed December 9, 2012, <http://plato.stanford.edu/archives/fall2011/entries/merleau-ponty/>. Flynn described that “third dialect is characterized by the Hegelian term ‘work’.”

Heidegger lean toward non-linguistic signification.²³³ The proximity of ontology and phenomenology was demonstrated by Merleau-Ponty's philosophy of language. His extension to non-linguistic perceptual experience was guided to monadic aspect of signification rather than Saussure's dyadic theory. Heidegger's interpretation of ontological meaning and Merleau-Ponty's non-linguistic signification system can be similarly monadic.

The influence on architecture is made through Heidegger by Norberg-Schulz. He developed his theory of Phenomenology architecture in the light of Heidegger's 'Being and Time'. Also Kenneth Frampton theorized 'critical regionalism' along with phenomenology philosophy. In general, the consciousness of environment became a major consideration for architectural design arena.

III.8 Hermeneutics (Gadamer, Ricoeur, and Habermas) in the 20th Century

While interpretation of perceptual experience was questioned by phenomenology and existentialism philosophy, philosophical hermeneutics provided the dimensions of meaning for interpretation and communication. Heidegger's ontological hermeneutics was originated from Friedrich Daniel Ernst Schleiermacher (1768-1834) for the theory of interpretation and translation that was a doctrine of the philosophy of language, and Wilhelm Dilthey (1833-1911) for the interpretation of history with objectification. Heidegger was followed by Hans-Georg Gadamer (1900-2002) for the transition from ontological hermeneutics to a philosophy of language, Paul Ricoeur (1913-2005) in the area of interpretation theory concerning with narrative, and Jürgen Habermas's (born 1929) theory of communication with the influence shared by pragmatism. The philosophy of language was benefited to shape its theory by the influences from philosophical hermeneutics. The aim of hermeneutics has changed how to communicate rather than how to read text and symbol in the philosophical hermeneutics.

²³³ Ibid.

Heidegger's ontological hermeneutics changed the purpose of hermeneutics from the interpretation of texts to the understanding of existence, the reality of the 'beings' and 'Being' in the world. In hermeneutics the notion of 'hermeneutic circle' inherits the complex of linguistic matter, the relationship whole and part originated from existential hermeneutics. The interpretation of a partial text is depending on the understanding of whole meaning of entire texts, and the understanding of entire texts is also cannot be independent from the interpretation of texts which consists of entire whole. Heidegger configured 'Dasein' as the center to connect *beings* to the world. In this scope, Heidegger dealt with parts and whole in order to apply to the relation between one's existence and the existence of entire world. Therefore, hermeneutics is not mere technical methodology of interpretation. That is the most fundamental necessity to understand self, meaningfulness regarding "the condition of man's being in the world."²³⁴ The theory of hermeneutics then shifted to linguistics (from Gadamer to Ricoeur) and pragmatism (Habermas).

Gadamer was a Heidegger's student and followed Heidegger's ontological hermeneutics in order to develop his own philosophical hermeneutics. Gadamer was engaged with humanistic aspect of hermeneutics. The subjectivity of interpretation is definitely relevant to human behavior and language in order to comprehend the meaningfulness of phenomenon. The linguistic mediation became an important function for Gadamer's hermeneutics. Gadamer combined Heidegger's ontological hermeneutics with humanism in a sense. The influence from Heidegger to Gadamer, how to deal with truth, illustrated the main point. While Heidegger concerned with existence and facticity that is "the investigation of basic structure of factual existence" instead of text interpretation, Gadamer emphasized the understanding of truth without negating Heidegger's framework of existential hermeneutics. The truth for Heidegger concerned with the basic relation to the word according to Malpas. In '*The Origin of the Work of Art*,'²³⁵

²³⁴ Bjørn Ramberg and Kristin Gjesdal, "Hermeneutics," *ibid.* (Summer 2013 Edition). Accessed December 9, 2012, <http://plato.stanford.edu/archives/sum2013/entries/hermeneutics/>.

²³⁵ Martin Heidegger, "The Origin of the Work of Art," in *Off the Beaten Track*, ed. Julian Young and Kenneth Haynes (Cambridge, MA: Cambridge University Press, 2002 (1950)).

“Heidegger connects art with truth, arguing the essence of the artwork is not its ‘representational’ character, but rather its capacity to allow the disclosure of a world.”²³⁶ This basic concept was called as “*unconcealment*” by Heidegger. Unconcealment is relevant to the idea of partial disclosure which is half transparent “that can never be made completely transparent.”²³⁷ Through this partial disclosure, our relation to the understanding of the work of art will be possibly reach ‘truth.’ The two elements including ‘art with truth’ and ‘partial disclosure,’ according to Malpas, “connected with Gadamer’s response to the subjectivist and idealist,” the tradition of neo-Kantian idealist, who led romantic hermeneutics, provided aesthetic theory. His subjectivism was eventually became the concept of “ontological structure of art” that emphasized ‘play’, which is relevant to the idea of “dialog and practical wisdom” which came from ancient Greek philosophers such as Plato and Aristotle, according to Malpas. This ontological structure, Malpas explained, is originally developed from early Heidegger’s *hermeneutical situatedness*. Therefore, Gadamer’s developed his theory, philosophical hermeneutics, woven with Heidegger’s existentialist philosophy. For Gadamer the way of understanding is associated with ‘anticipation of completeness’ which leads meaningful whole that connects his notion of ‘pre-judgment.’ His hermeneutics emphasized and questioned the structure of understanding, “the conception of prejudice.”²³⁸ Gadamer’s understanding therefore needed a conversational mode to determine ‘truth,’ without being kept by prejudice. His linguistic approach was effective contribution for that purpose. Through conversation mode we can seek the agreement of understanding that requires the process to utilize language. In his *Truth and Method*, Gadamer emphasized the connection between linguistic and hermeneutics by means of

²³⁶ Jeff Malpas, "Hans-Georg Gadamer," in *The Stanford Encyclopedia of Philosophy* ed. Edward N Zalta (Summer 2009 Edition). Accessed December 9, 2012, <http://plato.stanford.edu/archives/sum2009/entries/gadamer/>.

²³⁷ Ibid.

²³⁸ Ibid.

conversation. By Gadamer language was treated as “the universal horizon of hermeneutics experience,” and “hermeneutics experience is itself universal.”²³⁹

The shift from existentialism to hermeneutic interpretation was made by Ricoeur through his methodological shift during the 1960s. He focused on human reality and combined phenomenology with hermeneutic interpretation according to the explanation of Bernard Dauenhauer and David Pellauer.²⁴⁰ The characteristics of Ricoeur’s contribution to hermeneutics include the concept of narrative, identity, and collective memory. The normativity of experience is associated with the consciousness of time and the system of time. Ricoeur’s conception of historical time developed his hermeneutics with identity and collective memory. Ricoeur explained, according to Dauenhauer and Pellauer, two different time concepts: (1) *cosmic time*, and (2) *lived time*. ‘Cosmic time’ is universal time while ‘lived time’ is the idea of personal and experienced time. These two different time concepts can create more intelligent idea of time which is called *historical time*. ‘Historical time’ provided us new time experience with the combination of cosmic time and lived time. With this new time our experience of time emphasis and coordinate a new sequence of time which is called by Ricoeur the *historical present*. According to Dauenhauer and Pellauer, in *Time and Narrative*²⁴¹ this new sequence of time involves action and event sequence that is humanistic time concept and led the idea of new concept of *narrative mode*. In this mode the framework of “dialectic between memory and history”²⁴² was established. He analyzed personal identity and found the relevancy of narrative identity as anthropological bases. Dauenhauer and Pellauer explain he rejected knowledge of single universal view of history, but he accepted un-interpreted past facts and memories that are waiting to be interpreted as truth. However, Ricoeur knows interpretation is open to be changed by new one. The Speech-act theory was

²³⁹ Ibid.

²⁴⁰ Bernard Dauenhauer and David Pellauer, "Paul Ricoeur," *ibid.* (Winter 2012 Edition). Accessed December 9, 2012, <http://plato.stanford.edu/archives/win2012/entries/ricoeur/>.

²⁴¹ Paul Ricoeur, *Time and Narrative*, trans. Kathleen McLaughlin and David Pellauer, vol. 1-3 (Chicago, IL: The University of Chicago Press, 1984).

²⁴² *Memory, History, and Forgetting*, trans. Kathleen Blamey and David Pellauer (Chicago, IL: University of Chicago Publishing, 2004), 168.

taken by him to illustrate his interpretation theory according to Dauenhauer and Pellauer. He restrained time conscious and concerned with narrative and metaphor. In *Memory, History, Forgetting*, Ricoeur claimed if we do not have memory, there can be no history.²⁴³ To have history, inevitably we need memories that can construct history by sharing with the memories of others and being influenced by it. He called these individual memories to be shared is ‘collective memory.’ To process the interpretation of historical facts, we have shared individual memory with analogous and objective manner within a community and group. By understanding his notions the concept of ‘*collective memory*’ can be also analogous to his time concept with the relationship between ‘*cosmic time*’ and ‘*lived time*,’ and the mode of narratively will be historical time which led his idea of ‘*historiographical operation*’²⁴⁴ of historian’s research methodology. Ricoeur described his three part integrated philosophy on hermeneutics “through the phenomenology of memory, the epistemology of history, and hermeneutics of historical condition.”²⁴⁵

From interpretation hermeneutics to that of communication Jürgen Habermas played practical and theoretical roles. His philosophical framework is widely recognizable including hermeneutics, critical theory, and pragmatism. James Bohman and William Rehg described his criticism on multi-disciplinary as such “Habermas defended this philosophical anthropology most fully in his *Knowledge and Human Interests* ²⁴⁶...., the work that represents his first attempt to provide a systematic framework for an interdisciplinary critical theory.”²⁴⁷ In 1960s and 70s his task was to “establish critical social theory as a respectable, distinct form of knowledge, in large measure through a methodological critique of the then-dominant positivist philosophy of science and

²⁴³ Ibid.

²⁴⁴ Dauenhauer and Pellauer, "Paul Ricoeur." They explain historiographical operation called by Ricoeur is for the task of historians’ research.

²⁴⁵ Ricoeur, *Memory, History, and Forgetting*, xvi.

²⁴⁶ Jürgen Habermas, *Knowledge and Human Interests* (Boston, MA: Beacon Press, 1972).

²⁴⁷ James Bohman and William Rehg, "Jürgen Habermas," in *The Stanford Encyclopedia of Philosophy* ed. Edward N Zalta (Winter 2011 Edition). Accessed December 9, 2012, <http://plato.stanford.edu/archives/win2011/entries/habermas/>.

historicist hermeneutics.”²⁴⁸ His cognitive interest on hermeneutics ranged from empirical-analytic to social sciences beyond positivist framework. His contribution through *The Theory of Communicative Action*²⁴⁹ developed his methodological breakthrough of “intersubjective form for emancipation”²⁵⁰ beyond his critiques on the knowledge framework of positivism, Freud, and Marxist. Regarding the framework of knowledge, Habermas described “the historic-hermeneutic sciences gain knowledge in a different methodology framework.”²⁵¹ He was seeking appropriate form of knowledge with the best fit methodology for interpretation. By doing so, interpretation of knowledge through appropriate communicative action can be valid. In *The Theory of Communicative Action*, Habermas grounded his methodology that “communication action requires an interpretation that is rational in approach.” He questioned rationality and validation of knowledge in *Knowledge in Human Interests*, and provided the condition to the appropriate method in *The Theory of Communication Action*. Essentially, his philosophy is critical and pragmatic; however, he concerns pluralistic approach to his theory that deals “knowledge-constitutive interests.” Habermas developed the linguistic aspect approach for communicative competence through speech act theory. His emphasis, Bohman and Rehg explains, is on language, especially regarding the pragmatics; his pragmatic account is on “his own distinctive definition of rationality, one that is epistemic, practical, and intersubjective.”²⁵² On the account of critical theory, in *The Philosophical Discourse of Modernity*²⁵³ his critique on modernity can be seen in the discourse between other philosophers such as Heidegger, Adorno, Foucault, Derrida, and other modern and postmodern philosophers. His challenge was

²⁴⁸ Ibid.

²⁴⁹ Jürgen Habermas, *Reason and the Rationalization of Society*, 2 vols., vol. 1, *The Theory of Communicative Action* (Boston, MA: Beacon Press, 1981). *Lifeworld and System: A Critique of Functionalist Reason* 2vols., vol. 2, *The Theory of Communicative Action* (Boston, MA: Beacon Press, 1987).

²⁵⁰ Bohman and Rehg, "Jürgen Habermas."

²⁵¹ Habermas, *Knowledge and Human Interests*, 309.

²⁵² Bohman and Rehg, "Jürgen Habermas."

²⁵³ Jürgen Habermas, *The Philosophical Discourse of Modernity: Twelve Lectures*, trans. Frederick Lawrence (Cambridge, MA: MIT Press, 1990).

made in the broad range through this discourses that test his theoretical underpinnings of his version of rational views.

Ricoeur and Habermas both influenced theories of architecture after modernism through Kenneth Frampton's notion of critical regionalism. Frampton's theoretical background of critical regionalism was influenced by binary system form Hanna Arendt's writing of '*The Human Condition*.'²⁵⁴ K. Michael Hays's view is that Frampton developed this theory along with on the frame work of "Jürgen Habermas's 'lifeworld' versus 'system' and Paul Ricoeur's 'universal civilization' versus 'national culture' ... intended to give dialectic account" by aiming of modernization.²⁵⁵ Architecture for Frampton is aimed to practice for a resistance between binary situations by mediating both oppositions. In the theory we have mitigation of universality and technology on the one side, and the other, locality and vernacular as such. This mediated duality with the optimization is essentially the basic condition in order to theorize architecture. Frampton shares phenomenological hermeneutics for his critical regionalism. The notion of "collective memory" described in *Memory, History, and Forgetting*²⁵⁶ is similar to that of Aldo Rossi's 'collective memory' that "the city itself is the collective memory of its people, and like memory it is associated with objective and places. Rossi described: "The city is the locus of the collective memory."²⁵⁷ Peter Eisenman explained in the introduction of *The Architecture of the City* that "The time as collective memory leads Rossi to his particular transformation of the idea of type. With the introduction of memory into the object, the object comes to embody both an idea of itself and a memory of former self."²⁵⁸ The influence of Saussure's semiology made a bridge between Ricoeur and Rossi. Ricoeur described his language theory, *Interpretation Theory: Discourse and The*

²⁵⁴ K. Michael Hays, *Architecture Theory since 1968*, ed. K. Michael Hays (Cambridge, MA: The MIT Press, 2000), 358.

²⁵⁵ Ibid.

²⁵⁶ Ricoeur, *Memory, History, and Forgetting*, 93-96.

²⁵⁷ Rossi, *The Architecture of the City*, 130.

²⁵⁸ Ibid.

*Surplus of Meaning*²⁵⁹ following Saussure as his language structural model, while Rossi mentioned Saussurean semiology as a background theory in *The Architecture of the city*. In a sense Ricoeur and Rossi both intended to make a similar transformation between diachronic and synchronic system in general.

For interpretive hermeneutics instrumental aspect of communication became a main consideration. Habermas's communication theory along with modernism thoughts with pragmatism was influence from Habermas version of hermeneutics. With the relation to the essential concept of modernity, Habermas discussed the difference between programmatic and transitory concept of modernity in *Modernity – An Incomplete Project*,²⁶⁰ and *Architecture and Modernity*, by Hilde Heynen.²⁶¹ Although the concept of transitory was emphasized, comparing with Habermas's 'programmatic approach,' the intention of classical pragmatism would be an argument in terms of the original pragmatism philosophy which Peirce developed, the core concept can be an instrumental process without foundationalism dogmatization which can be represented as 'transitory.' Heynen advocates transitory approach through the description of Charles Baudelaire: "Modernity is the transitory, the fugitive, the contingent, the half of art which the other half is the eternal and the immutable"²⁶² (cited in *Architecture and Modernity*) with the supremacy to a radical opposition, Jean Baudrillard's postmodernism. The influence on postmodern architecture and language theory of architecture was essential through hermeneutics. Klassen described the understanding of architecture through Phenomenological Hermeneutics that is based on Heidegger and Gadamer: "interpretation is mediation, rather than contemplative reconstruction."²⁶³ Therefore, the influence from hermeneutics is substantially inevitable for the role of language of architecture, which is mediation, in ontological, communicative, and phenomenological aspects. The concept of mediation is the major function of Peircean semeiotic theory that

²⁵⁹ Paul Ricoeur, *Interpretation Theory: Discourse and the Surplus of Meaning* (Fort Worth, TX: Texas Christian University Press, 1976).

²⁶⁰ Habermas, "Modernity – an Incomplete Project, and Architecture and Modernity." 1-15.

²⁶¹ Hilde Heynen, *Architecture and Modernity* (Cambridge, MA: MIT Press, 1999), 11-12.

²⁶² Ibid., 12.

²⁶³ Klassen, *Architecture and Philosophy*, 103.

might establish the relation between hermeneutics and Peircean language theory on architecture.

III.9 Marxism (Walter Benjamin, Theodor Adorno, Frankfurt School) in the 20th Century, in Architecture (Tafuri and Venice School)

The influence from Marxism to Modern and Postmodern architecture was through the Frankfurt School. Dialectical Materialism contributed the emancipation towards ‘classless society.’ The work of Walter Benjamin²⁶⁴ (1892-1940) and Theodor Adorno²⁶⁵ (1934-1949) were influential neo-Marxist philosophers from the Frankfurt School. Benjamin held romanticism characteristics and influenced Adorno who influenced Jacques Derrida and Gilles Deleuze through his notion of ‘negative dialectics.’

Benjamin’s experience theory influenced architectural language and metaphor. Architecture was “the prototype for the new mode of reception.”²⁶⁶ Benjamin’s theoretical approach of language consists of two aspects: (1) mimesis, the origin of language in his theory that was not those of conventional signifier and signified relation, and (2) experience which includes *Erlebnis* (sensational experience) and *Erfahrung* (perceptual experience with correspondence and similarity).²⁶⁷ For Benjamin genuine experience is originated from mimesis, similarity. The relationship between *Erlebnis* and *Erfahrung* composed as the major frame for his experience theory and eventually become triadic system. Benjamin’s theory of experience forms triadic experience (“paradise, fall, and redemption”)²⁶⁸ that aimed ‘classless society’. The influence on architecture through ‘*Durchdringung*’²⁶⁹ (transparency with sequence) was ideal

²⁶⁴ Osborne and Charles, "Walter Benjamin." Accessed March 1, 2013, <http://plato.stanford.edu/archives/win2012/entries/benjamin/>.

²⁶⁵ Lambert Zuidervaart, "Theodor W. Adorno," *ibid.* (Winter 2011 Edition). Accessed March 1, 2013, <http://plato.stanford.edu/archives/win2011/entries/adorno/>.

²⁶⁶ Heynen, *Architecture and Modernity*, 107.

²⁶⁷ *Ibid.*, 97-98.

²⁶⁸ *Ibid.*, 102.

²⁶⁹ *Ibid.*, 117. The term *Durchdringung* was used by Giedion: “Giedion’s use of the terms, *Durchdringung* and transparency to describe the architecture of the New Building appealed to him considerably, as did the idea that the structure played the part of the unconscious.”

realization of a metaphor for classless society.²⁷⁰ Benjamin's idealistic thoughts had *messianic figure* with triadic language theory is surely different mode from that of Saussure. The philosophy of Benjamin for transparency is obviously reflected to his goal of emancipation in the classless society. Heynen described "it is unquestionable the case that Benjamin hoped for revolutionary 'reversal' (*Umschlag*) that would transform the life of the individual and of the collective by achieving a public openness, transparency, and permeability as conditions of everyday life."²⁷¹ Furthermore, according to Heynen, Benjamin's philosophical feature was transitory with a complex view of modernity.

To reach ideal goal of transparency this triadic experience creates meaningfulness. Regarding the perceptual experience with correspondence and similarity, the structure of mimesis could be reminiscence to the notion of *adicity* which might correspond to the notion of 'stand for' described in Peircean semeiotic and logic. Benjamin's belief of *mimesis* is the origin of language can be an analogy to Peircean notion of *adicity*. With the reflection of modes of being in terms of Peircean theory, *Erlebnis* (sensational experience) is that of monadic, while *Erfahrung* (perceptual experience with correspondence and similarity) is that of dyadic. With these combinations it is possible to generate triadic relations. The interrelated process, Heynen describes: "whereas *Erfahrung* has to do with a gradual initiation into tradition, *Erlebnis* refers to superficial sensations. These are intercepted by an alert consciousness and responded to straightaway."²⁷² While Benjamin's language origin is from genuine experience, which is possibly monadic, the experience consists of two parties including monadic sensational experience and dyadic perceptual experience. This dyadic perceptual experience consists of two parties including correspondence and similarity. This aspect deals with the generation of historical factuality. In some respect, Heynen's description of triadic relation is related to Peircean theory, which will be discussed in the Chapter VI – *Peircean semeiotic and logic*.

²⁷⁰ *Ibid.*, 106.

²⁷¹ *Ibid.*, 118.

²⁷² *Ibid.*, 98.

The influence on architecture can be seen in the movement of Venice School of Architecture. The influence on Manfredo Tafuri (1928-1994)'s utopianism and avant-garde theory received the influence from Walter Benjamin, Theodor Adorno, and other philosophers who are exponents of Frankfurt School as Massimo Cacciari (born 1944) stated.²⁷³ They described emerging feeling and value caused by hidden negative mental formation which is twisted to have positive value, meaningfulness. Their influence on architecture was of modernity. Adorno's principle works were *Dialectic Enlightenment*,²⁷⁴ *Negative Dialectics*,²⁷⁵ and *Aesthetic Theory*.²⁷⁶ *Negative Dialectics* underlines his philosophy and logic that attempted to explain contradictory of phenomenon. Heynen cited in *Architecture and Modernity*: "Adorno states explicitly that *Negative Dialectics* is an attempt to make a consistent use of logic in order to trace that which escapes the hegemony of the unity principle and of a hierarchically organized conceptual apparatus."²⁷⁷ For example under this principle of negative dialectics, Adorno's idea of reality, Heynen described "reality is non-identical: reality is not simply what it is, it does not entirely coincide with itself, but continually refers to something else, to something more than itself."²⁷⁸ Then, this reality of nonidentity must be manifested in language. Only through language the idea can be constructed and become identifiable concept according to Heynen. Language became a means for transit totality through its use of constellation. For Adorno, identical totality should be *negated* unlike earlier Wittgenstein's formula in language which can be seen in his *Tractatus*. Wittgenstein showed his logic and representation issues with reductionist view while Adorno took oppositions that characterized language more mediatory, inclusively, and contradictory. *Dialectic of Enlightenment* showed basic ingredients how modernity was

²⁷³ Massimo Cacciari described the relation between architecture and philosophy in terms of the experiencing frame of negative thought. For example, see Massimo Cacciari, *Architecture and Nihilism: On the Philosophy of Modern Architecture*, trans. Stephen Sartarelli (New Haven, CT: Yale University Press, 1993).

²⁷⁴ Max Horkheimer and Theodor W. Adorno, *Dialectic of Enlightenment*, trans. Edmund Jephcott, Cultural Memory in the Present (Stanford, CA: Stanford University Press, 2007).

²⁷⁵ Adorno, *Negative Dialectics*.

²⁷⁶ *Aesthetic Theory*, trans. C. Lenhardt, Theory and History of Literature (London, UK: Routledge & Kegan Paul, 1983).

²⁷⁷ Heynen, *Architecture and Modernity*, 178.

²⁷⁸ *Ibid.*

developed by taking enlightenment as the central core to understand enlightenment itself along with critical rationality and instrumental rationality as Heynen explained following Horkheimer and Adorno.²⁷⁹ Dialectic Enlightenment is the projection of emancipation and it was twisted between critical and instrumental rationality when rationality was reduced to the instrumental rationality. Then, rationality is no longer representing emancipation. In the dialectic process Adorno attempted to show this contradiction. Heynen concluded Adorno's transitory characteristics and contradiction showed his concept of modernity, and "he sees modernity as on the one hand ending toward a monolithic, unambiguous control over both the individual and over social life as a whole, while on the other hand it represents the promise of a different future and provides the means and potential to achieve it."²⁸⁰ Adorno's *Aesthetic theory* (1970) characterized his theoretical underpinning that is ambivalent and transitory. The concept of *mimesis* and *negativity* constructed the main philosophical base of his Aesthetic Theory. Benjamin's belief of mimesis that is the origin of language, influenced on Adorno's concept in language and aesthetic. In *Dialectic of Enlightenment*, Adorno explained: "sign and image formed, under the form of the symbol, a unity of language ... in which signification is the result of the merging of abstract reference in a sign and imitation in an image."²⁸¹ The unity of language is composed of sign and image under the function of symbol. But, this unity can be separable for the view of Adorno. The development of sign and image further continued as scientific world in language and art in mirror image according to Heynen. The separation between sign and image provided the opportunity for the development of pureness and thus leads the autonomous which claims negation. He sees negativity of modern as the crisis of experience. A critical approach dominated Adorno's view in work of art. As the central idea of the process in aesthetic theory, Adorno explained that "critical value of a work of art is not embodied in the themes it deals with or in the so-called 'commitment' of the artist, but in the artistic process

²⁷⁹ Ibid., 180.

²⁸⁰ Ibid., 183.

²⁸¹ Ibid.

itself.”²⁸² And contradictory, “Art must become ... mimesis of opposite...” in order to be “compelled ... by tis social reality.”²⁸³ This realization of value of art can only be possible through identification of opposition, *mimesis of opposite*. This negativity of metaphor is essential for his philosophy and theory of aesthetic that creates inverted value between positive image and that of negative by means of mimesis of image and created value such as thoughts. In the architectural field, Adorno’s approach to language theory and aesthetic theory took strong influential position for the critique of architecture and became theoretical background in the creation of architecture among postmodernist and deconstructivist architecture. Adorno and Benjamin both aimed to pursue the idea of emancipation and both held the characteristics of transitory. These two directions are combined for the purpose of their philosophy. In architecture this tendency was carried out by the process of modernity in architecture. Heynen described “modernity units the contradictory dimensions of the programmatic and the transitory – it refers both to a project that aims to design a future of liberation and emancipation and to an experience of acceleration and melting.”²⁸⁴ In this sense, the influence of neo-Marxism and Frankfurt School became dominantly in modernist and deconstructivist architecture. The work of Tafuri represented this influence from Marxism philosophy to architecture radically theorized architecture through critiques on modernism ideology of architecture. His work, K. Michael Hays described, “formulates the entire cycle of modernism ... as a unitary development in which the avant-gardes’ visions of utopia come to be recognized as an idealization of capitalism, ...”²⁸⁵ This situation for Tafuri was the reality of “contemporary architecture’s only condition of possibility.”²⁸⁶ Under this format, the reification of architecture for emancipation was demised and invited the useless ideology of social production that means the end of architecture for Tafuri. The purpose of architecture was aligned with the politicization under the rubric of dialectic materialism and Hegelian system with the utopianism purposed emancipation. Tafuri criticized the

²⁸² Cited in *ibid.*, 185.

²⁸³ Cited in *ibid.*, 186.

²⁸⁴ *Ibid.*, 217.

²⁸⁵ See Hays’ comment on Manfredo Tafuri. Hays, *Architecture Theory since 1968*, 2.

²⁸⁶ *Ibid.*

loss of artistic experience during modernity by leaning to Baudelaire, and he was aware of linguistic aspect of modern art.²⁸⁷ For him modernism architecture was turned to aesthetic experience rather than the ideology of architecture.²⁸⁸ City has crisis without organizational structure, and architectural function disturbed its own ideology.²⁸⁹ Tafuri viewed the essential aspect of “the crisis of modernism architecture” in “a crisis of the ideological function of architecture.”²⁹⁰ The approach of Tafuri was influential among modernist and deconstructivist along with the influence of Benjamin and Adorno, especially with ideology, language of architecture, and the expression of architecture. He saw architecture became a part of production as an instrumental unit and operational mechanism under realism and political utopianism in the frame of modernity and capitalism. With regard to the characteristics of the expression of architecture in humanity and habitation issue became an essence of architectural meaning projected on ontology and phenomenology. Heynen pointed out inhabitability of *dwelling* was issues to express through work of architecture in modernism and deconstructivist architecture. And, the original matter of neo-Marxist consideration, which was the emancipation of humanity, was relevant to this point. This line can be traced by the recognition of twisted negative value through Adorno’s negative dialectic to Derrida’s logocentrism and its followers, architectural deconstructivist theory. She described this issue along with the original concept of Heidegger, neo-Marxist, and work of architecture such as Jewish Museum by Daniel Libeskind.²⁹¹ However, tectonic and subliminal aspects of architecture seem to be sustained by neo-Marxist architectural theory. After the recognition of this point the returning to the issue of language of architecture following Saussurean origin linguistics theory such as Roland Barthes in the 1970s became a theoretical target in order to confine social value for the criticism by neo-Marxist theory.

²⁸⁷ Tafuri, "Toward a Critique of Architectural Ideology," 16-17.

²⁸⁸ Ibid., 21.

²⁸⁹ Ibid., 25-28.

²⁹⁰ Ibid., 32.

²⁹¹ Bernard Tschumi, "The Architectural Paradox," *ibid.*, 222.

III.10 Structuralism and Post-structuralism (Piaget, Lévi-Strauss, Roman Jakobson, Saussure, Barthes, Lacan, Derrida, and Deleuze) in the 20th Century

In the 1960s after subjective French existentialism philosophy was subsumed, more objective philosophy called structuralism became a new intellectual framework. This philosophy further was recognized as post-structuralism in the late 1980s. Although structuralist including philosophers who became post-structuralist shares the common doctrine that structure engages to determine or to form meaning and impersonal characteristics in thought, the involved disciplines were diversified as the theory progressed. Five philosophers and thinkers can be named for this new thought including Lévi-Strauss, Michel Foucault, Roland Barthes, Jacques Lacan, and Louis Althusser according to John Sturrock.²⁹² Lévi-Strauss (1908-2009) was an anthropologist who adapted linguistic thought to his methodology by establishing structuralism following Ferdinand de Saussure. Michel Foucault (1926-1984) invented a new way of thinking about history, archaeological concept of genealogy. Roland Barthes (1915-1980) was a theorist on culture and literature. Jacques Lacan (1901-1981) was a psychoanalyst following Freudian theory. And, Louis Althusser (1918-1990) was a neo-Marxist political philosopher.

The origin of structuralism can be traced to the influence of Ferdinand de Saussure, who was called as the father of structural linguistics. His influence on structuralism was realized as structural linguistics that provided the models to other disciplines which share the view of structuralism. The philosophy of language is indebted to Saussure's sign theory called semiology. In the process to evolve structuralism Lévi-Strauss recognized needed to adapt semiology to his anthropological research to determine imbedded cultural structural systems and human nature beyond community and group such as tribe. Saussure's linguistics system, which was reconstructed by his students as a '*Course in General Linguistics*'²⁹³ from his lecture on general linguistics, was held as the model to construct general idea of structuralism. Saussure's structural linguistics was

²⁹² John Sturrock, *Structuralism*, trans. Jean-Michel Rabaté (Hoboken, NJ: Wiley-Blackwell, 2003), 19.

²⁹³ Saussure, *Course in General Linguistics*.

further developed by linguists such as Roman Jakobson (1896-1982). Jakobson developed general sign theory, he called “semiotics” that includes linguistics as its branch.²⁹⁴ The application of the model was diversified to anthropology, historiography, psychology, mathematics, logic, literature, art, and architecture. Along with philosophy of language, structuralism held linguistics and sign theory tradition that are generally called as ‘semiotics.’ I will describe the theory of Saussure’s semiology with its influence onto the theories of architecture extensively in the Chapter V – *Saussurean Postmodern Architecture*.

Aligned with Saussure, structuralists share the general view “for studying its objects explicitly as wholes and the parts which make up those wholes as part, that is never purely intrinsically but in terms of the contribution they make to the whole they are part of.”²⁹⁵ In short, structuralism can be defined as “a holistic mode of thought”²⁹⁶ rather than reductionism of atomism thought. In the late 1980s, structuralism was extended widely towards social anthropology, historiography, and psychoanalysis. Structuralism was transformed as post-structuralism in order to suite contextual and psychological value involvement from the original non-subjective self-negation paradigm that structure can determine relationships and meaning impersonally, and self-sufficiently. Man’s mental relationship with a structured whole was again reconsidered in order to determine and seek truthful meaning. Philosophers such as Jacques Lacan, Jacques Derrida, and Gilles Deleuze belong to post-structuralist. For the linguistics field Noam Chomsky’s (born 1928) Generative Grammar opened the deep structure of language beyond that of static. His work “turned linguistics mentalistic again” from American structuralism and antimentalistic descriptivism.²⁹⁷ His work is also that of post-structuralism. The view of post-structuralist shares postmodernist philosophy that I explore in the next chapter

²⁹⁴ D.S. Jr. Clarke, *Source of Semiotic: Reading with Commentary from Antiquity to the Present* (Carbondale, IL: Southern Illinois University Press, 1990), 143-44.

²⁹⁵ Sturrock, *Structuralism*, 21.

²⁹⁶ Ibid.

²⁹⁷ Nöth, *Handbook of Semiotics*, 301. Antimentalistic descriptivism is explained: “In opposition to nineteenth-century historicism in linguistics ... Bloomfield’s approach agrees with the Saussurean shift from diachronic to synchronic analysis.” It “prefers a behavioristic approach to language.” It does not include internal mental issue such as ideas and concept, and intentions.

(Chapter IV – *Postmodern Philosophy*). And I will discuss postmodern philosophy with the comparison to Charles Peirce’s original pragmatism philosophy.

In order to find the core of structuralism, the attempted definition of structuralism would provide a better understanding. It can be seen in the description of a developmental psychologist Jean Piaget (1896-1980). He listed three main observing points for an arrangement of structural entities: (1) *wholeness*, (2) *transformation*, and (3) *self-regulation*.²⁹⁸ *Wholeness* is “the sense of internal coherence,” and “the arrangement of entities will be complete in itself.”²⁹⁹ “Its constituent parts will conform to a set of intrinsic laws which determine its nature.”³⁰⁰ This is self-contained and self-regulated characteristic of arrangement. By constituted laws, the wholeness holds the tendency to maintain self-organized stableness of structure in a sense. However, since “the laws which govern its act so as to make not only structured,”³⁰¹ it is *structuring* dynamically. Therefore, structure of wholeness must have some “*transformational procedure*”.³⁰² The final part, *self-regulation* characteristics shows a closed system of structure, which is a self-governed transformation procedure like a language.³⁰³ To illustrate a better view of the theory of structuralism I summarize points by the main players including Saussure, Jakobson, and Lévi-Strauss.

Saussure’s *Course in General Linguistics* proved a basic model of structural linguistics. His linguistics is called distinctively *semiology, as science of sign* in spite of his successor’s naming of their developed theory such as ‘semiotics.’ Saussure developed semiology for the “study of all systems of sign used in human communication”³⁰⁴ including language and non-verbal language. His linguistics was in the branch of semiology in this respect. With dyadic structures Saussure developed his theory on verbal language which includes binary relationship between concept (meaning) and

²⁹⁸ Terence Hawkes, *Structuralism and Semiotics*, New Accents (Routledge, 2003), 5.

²⁹⁹ *Ibid.*

³⁰⁰ *Ibid.*

³⁰¹ *Ibid.*, 6.

³⁰² *Ibid.*

³⁰³ *Ibid.*

³⁰⁴ Clarke, *Source of Semiotic: Reading with Commentary from Antiquity to the Present*, 124.

sound image (phonetic sound), the distinctive relations between *diachronic* and *synchronic*, and the differentiation of characteristics of language between *langue* and *parole*. For the generation of meaning in his theory, *linguistic sign* must be created through the relationship of *concept* and *sound image* universally beyond the difference of language. In general, *concept* corresponds to “*signified*” and so as *sound image* to “*signifier*.” The idea of *synchronic* is the relationship of “*simultaneities*” such as spatial relations, while *diachronic* is that of “*successions*” such as historical relations. Synchronic and diachronic relations are categorized within *langue*, which is accepted as a form of language publicly, and *parole*, which is a personal speaking not an established as a form of language publicly yet. According to Saussure, “we can add that everything diachronic in language [langue] is diachronic only by virtue of speaking [parole].”³⁰⁵ The role of *parole* is to provide a new form through such as analogy by repeating within a community. In Saussure’s system *human speech (language)* consist of *language (langue)* and *speaking (parole)*. *Language (langue)* consists of *diachronic* and *synchronic*.³⁰⁶ These binary relations are self-sufficiently provided within a language system. Through the influence of semiology, the concept of binary opposition is a major characteristic of structuralism. Post-structuralism in a sense radicalized their interrogation about this binary structure as we can see in the form of deconstruction, Derrida’s philosophy.

Although semiology is for the study of general sign, mainly Saussure’s linguistics is about verbal language. Jakobson further developed more a general sign theory, called ‘semiotics’ by him limiting linguistics “confined to the communication of verbal language.”³⁰⁷ Although his main field of research was widely diversified, including poetics, linguistics, phonology, morphology, dialectology, and aphasiology, his interest was beyond linguistics and focused on art and aesthetics.³⁰⁸ He distinguished the

³⁰⁵ Saussure, *Course in General Linguistics*, 98.

³⁰⁶ Ibid.

³⁰⁷ Roman Jakobson, *Main Trends in the Science of Language* (London, UK: Allen & Unwin, 1973), 32. Cited in Nöth, *Handbook of Semiotics*, 75.

³⁰⁸ *Handbook of Semiotics*, 75.

category of semiotics “based on the relationship to spoken language” to three types: (1) *language substitutes* such as writing and the Morse code, (2) *language transforms* which are “formalized scientific language,” and (3) *idiomorphic system* “which are directly related to language” like “gesture or music.” His discovery of Charles Sanders Peirce’s sign theory that is relevant to linguistics and the contribution to the development of structuralism through the influence on Lévi-Strauss were distinguishable.³⁰⁹ Regarding the sign theory of Charles Sanders Peirce, to described the extension of his science of language to art is such: “the signs of a given art can carry the imprint of each of the three semiotic modes described by Peirce; thus, they can come near to the *symbol*, to the *icon*, and to the *index*, but it is obviously above all in their artistic characteristic that their significance (*semeiosis*) is lodged.”³¹⁰ In his study of communication he differentiated three levels of message including verbal message (linguistics), any message (semiotic), and social anthropology. His social communication study was influenced by Lévi-Strauss. His structure of semiotic was kept in binary. He described that “at all level of language, the reciprocal relationships between the two facets of sign, the *signans* [signifier] and *signatum* [signified]” remain and change “according to the level of linguistic phenomenon.” This implies basic his stance and the similarity to Saussurean semiology and the binary structure of structuralism, even if his attempt was to make more dynamic version of structuralism.

Lévi-Strauss was called as “*the father of structuralism.*” However, he was also influenced by other linguists such as Saussure and Jakobson. His research on myth was significantly influential for the further development of semiotics and structuralism. The theory of myth was initiated by Lévi-Strauss for the needs of the methodological development for the fields of anthropology by adapting structural linguistics binary system, *diachronic* and *synchronic*. This methodological development sought cross-cultural comparison of social structure of community in light of historical method and

³⁰⁹ Ibid.

³¹⁰ Roman Jakobson, "A Glance at the Development of Semiotic," in *The Framework of Language* (Ann Arbor: Michigan Studies in the Humanities, 1980), 18-22. Cited in Clarke, *Source of Semiotic: Reading with Commentary from Antiquity to the Present*, 146.

that of ethnographical. The approach of historical is diachronic while that of ethnographical is synchronic. Lévi-Strauss adapted Saussure's binary subcategories of *human speech (language)*. In order to merge this binary axis in the analyzable unit of time and space through "minimal unit of kinship" which is "elementary structure of a society,"³¹¹ he focused on dual society which is characterized by reciprocal relationship in a family organization. He called this *dual organization*. In this organization, the social relationships are represented by three types; "diametric dualism, concentric dualism, and triad."³¹² The theory of myth in *The Savage Mind*³¹³ was the result of cross-over between diachronic and synchronic. The integration of diachronic and synchronic was reciprocally relevant to the perception to shift from diachronic language theory to that of synchronic. This synchronic perception is "*collective consciousness*"³¹⁴ that is not individual consciousness but collectively structured as an abstract whole for structuralists.

The influence from structuralism onto architecture was introduced through language theory that defines the meaning of architecture after the monolithic modernism architecture, while for the precursors of this influence structuralism may exist in a formalism and rationalism of architecture. Aldo Van Eyck, Le Corbusier, and Kenzo Tange can be named architectural structuralism. Hal Foster (born 1955) describes the pre-existing formalism in art is aligned to the modernism aspects of structuralism.³¹⁵ It was the view associated with determinism and positivist trend with some exploration of cultural diversification following such as the view of Lévi-Strauss. Structure defines the meaning of architecture based on this theoretical inclination. The influence from Roland Barthes (1915-1980) is evident on the language of architecture the theorist such as Petros

³¹¹ Nöth, *Handbook of Semiotics*, 302. Kinship system represents many ways but interpretively. For example, "rules of prohibited marriage," "a system of communication," "elementary structures of a society."

³¹² Claude Lévi-Strauss, *Structural Anthropology*, trans. Claire Jacobson and Brooke Grundfest Schoepf (New York, NY: Anchor Books, Doubleday & Company, 1967), 150.

³¹³ *The Savage Mind*, Nature of Human Society (Chicago, IL: The University of Chicago Press, 1966).

³¹⁴ Sturrock, *Structuralism*, 29.

³¹⁵ Hal Foster et al., *Art since 1900 Modernism Antimodernism Postmodernism* (New York, NY: Thames & Hudson, 2004), 32-39.

Martinidis who presupposed the similarity of architectural language to that of verbal language.³¹⁶ The meaning of architecture can be interpreted to a discursive form of language. This view was following structural linguistics basic model and Saussure's semiology framework and its extension beyond verbal language. Originally Saussure aimed semiology to be more than verbal language as I described earlier of this section. Semiotician Thomas A. Sebeok (1920-2001) questioned this presumption whether architectonic follows linguistics or not.³¹⁷ Art historian Donald Preziosi (born 1941) also took a similar position and explored Jakobson's semiotic to apply architectural language theory.³¹⁸ The built environment through human perception, how it relates to language including verbal language and nonverbal semiotic held as subject matter in the 1970s. The code specific and cultural specific architectonic form was discussed as non-verbal communication. In order to achieve this purpose, architectural theorists borrowed theorists' insight from further developed philosophy of language.

III.11 Philosophy of Language (Saussure, Jakobson, Peirce, Morris, Eco) in the 20th Century

Language theories of architecture were concerned with the meaning of architecture and interpretation of architecture along with the philosophy of Hermeneutics. Linguistics theory adapted Ludwig Wittgenstein's systematic language theory and the formal system along with the structuralism movement. Philosophy of Postmodernism approached the indeterminable issue of knowledge similar to Hermeneutics. I reviewed the role of philosophies of language that influenced architectural language theories in the 1960s and 1970s. Behind these theories structuralism and post-structuralism contributed to shape the influence (returning to Kant) of linguistics (Saussure at first, and Chomsky),

³¹⁶ Petros Martinidis, "Semiotics of Architectural Theories: Toward an Epistemology of Architecture," *Semiotica*, no. 59 (1986). Cited in Clarke, *Source of Semiotic: Reading with Commentary from Antiquity to the Present*, 148-51.

³¹⁷ Thomas A. Sebeok, "Is a Comparative Semiotics Possible?," in *Contribution to the Theory of Signs* (Bloomington: Indiana University Press, 1976). Cited in *Source of Semiotic: Reading with Commentary from Antiquity to the Present*, 151-53.

³¹⁸ Donald Preziosi, *Architecture, Language, and Meaning: The Origins of the Built World and Its Semiotic Organization*, vol. vol. 49, *Approach to Semiotics* (New York, NY: Mouton Publishers, 1979).

psychology (Piaget), and anthropology (Lévi-Strauss) on architecture. Postmodern historicism attempted the interpretation of new meaning on architecture through eclectic application of classicism vocabulary, while Jacques Derrida's notion of deconstruction directed the Deconstructivist in architecture. The influence of structuralism and post-structuralism on language philosophy with respect to the language theory of postmodern architecture is widely accepted through such as the work of Jean Piaget. Structuralism approaches a more positivist and rationalism sense, while post-structuralism leans toward an aspect of mystified and indecisive romanticism characteristics. For example, post-structuralism (Jacques Derrida) and critical rationalism (Karl Popper) both argued against decisive positivist and empirical rationalist thoughts.³¹⁹ Philosophy of language eventually influenced a language theory of architecture through first Ferdinand de Saussure and successors' schools in language of philosophies, but it was the limited view of sign theory. In the field of philosophy of language, the structural difference between Saussure and Peirce is still debatable.³²⁰ When modernism shifted from continental philosophy and enlightenment, Kant and Hegel's philosophy encouraged the birth of Pragmatism, which opposes foundationalism. Peirce developed his philosophy from Kant's transcendental idealism, and was influenced by Hegel's dialectical idealism. Charles W Morris (1901-1979) and Umberto Eco (born 1932) have proximity of relationship to Charles Sanders Peirce. They are influenced from Peircean *Semeiotic*. Their theory on sign system was evidently influential to a language theory of architecture. I will discuss this process in Chapter V (*Saussurean Postmodern Architecture*). I will examine their proximity and distance to Peirce in terms of structure of their semiotic. Eventually, pragmatism developed Richard Rorty's postmodernism philosophy. This research intends to sketch out the proximity of post-structuralism to Peircean pragmatism³²¹ in order to capture the influence of American Pragmatism on

³¹⁹ Gelernter, *Sources of Architectural Form: A Critical History of Western Design Theory*, 268, 84-85.

³²⁰ Nöth, *Handbook of Semiotics*, 87.

³²¹ The comparison between Derrida's notion of deconstruction and Peircean Secondness is associated with the process of experience and contradiction. In order to have new experience, Peirce described the idea of secondness as "the experience of effort" and "brute action." This coincides with "the destruction of ... previous thinking in order to clear the ground for the new sensibility." See Gelernter, *Sources of*

postmodern architecture. In the shift from structuralism, which is scientific to hermeneutics, which is more poetic in language theory in architecture³²² this research will evaluate the parallel connection to the essence of Peirce's semeiotic theory.

III.12 Pragmatism (Peirce, James, and Dewey)

Although the name of 'pragmatism' was made by William James, the idea of pragmatism is founded by Charles Sanders Peirce through '*How to make our idea clear*' (1887).³²³ James called this idea as "principle of pragmatism."³²⁴ The principle follows Peircean notion '*pragmatic maxim*,' which aims to clarify a hypothesis by identifying a practical consequence. Peirce's first notion of *pragmatic maxim* was stated: "consider what effects, which might conceivably have practical bearings, we conceive the object of our conception to have. Then, our conception of those effects is the whole of our conception of the object."³²⁵ Charles Sanders Peirce, William James, and John Dewey are distinguished as 'classical pragmatists.' The characteristics of pragmatism are anti-skepticism, anti-foundationalism, and anti-nominalism. As related to the construction of postmodernism philosophy, Pragmatism played the role to abstain foundationalism and dogmatic determinism. In this sense, pragmatism shares the basic approach of epistemology with postmodernism philosophy. According to Ochs, Peirce is considered as "the logician of postmodernism."³²⁶ While his modernist-side attempted to find formal system, he attempted to accomplish the replacement of Cartesian principle of

Architectural Form: A Critical History of Western Design Theory, 285. And Peirce, *Collected Papers of Charles Sanders Peirce*. (CP 8.230).

³²² Klassen, *Architecture and Philosophy*, 12. Klassen summarized this movement as "a transition from a structural-sociological approach to language to a phenomenological-hermeneutic one." This means "from a scientific and technical approach to a more poetic and historical one."

³²³ Charles Sanders Peirce, "How to Make Our Idea Clear," in *Pragmatism and Classical American Philosophy: Essential Reading and Interpretive Essays*, ed. John J Stuhr (New York, NY: Oxford University Press, 2000).

³²⁴ Christopher Hookway, "Pragmatism," in *The Stanford Encyclopedia of Philosophy* ed. Edward N Zalta (Spring 2010 Edition). Accessed November 2, 2012, <http://plato.stanford.edu/entries/pragmatism/>.

³²⁵ Robert F. Kruckeberg, "Peirce Pragmatism and Science Education," *insights* vol. 37, no. 1 (July 2004): 8.

³²⁶ Peter Ochs, "Charles Sanders Peirce," in *Founders of Constructive Postmodern Philosophy: Peirce, James, Bergson, Whitehead, and Hartshorne*, ed. David Ray Griffin (Albany, NY: State University of New York Press, 1993), 43.

reasoning. He had “a habit of self-critical yet self-affirming thinking that was neither modernist nor antimodernist but, rather a disciplined variety of postmodern thinking.”³²⁷ While Peirce was the founder of the philosophy of pragmatism, James publicized this philosophy through intellectual discourse called ‘metaphysical club’ working with Peirce and others. James further developed this way of thinking and named as *pragmatism* in 1907. James set pragmatism as ‘method for settling metaphysical dispute’ and shared the view of *pragmatic maxim* with Peirce at some level. James approached from psychological behavior on which the practical consequence of proposition influences.³²⁸ Regarding the notion of inquiry, while Peirce understand the concept of inquiry as struggling behavior which came from his notion of ‘guiding principle,’ John Dewey followed Peirce, and he further developed his conception of inquiry as ‘*Logic: The Theory of Inquiry*’³²⁹ with radicalism in a sense. His inquiry is the source that directs the way to the indeterminate situation in order to transform this situation to a unified whole.³³⁰ Dewey was successful for theory in logic, scientific inquiry, philosophy of education, and aesthetic. After classical pragmatism the development of pragmatism diversified, for example, in the area of social identity, determination methodology, and communication. Other pragmatism philosophers for such areas includes Herbert Mead (1863-1931), Richard Rorty (1931-2007), Hilary Putman (born 1926), and Jürgen Habermas (born 1929). Mead developed identity of self with social relations. Rorty criticized “analytic philosophy and suggesting this tradition ... was converging on pragmatism as a postfoundationalist philosophical method.”³³¹ For Rorty to determine ‘truth’ through such pragmatic maxim is not the aim and need not to achieve; ‘term truth’ is the endorsement to our belief. Putman is an analytic philosopher and “argued for an ‘internal’ or ‘pragmatic realism,’ influenced by Peirce and James, for which the dependence of reference on humanly constructed theory does not undermine a realist

³²⁷ Ibid.

³²⁸ Hookway, "Pragmatism."

³²⁹ John Dewey, *Logic: The Theory of Inquiry* (New York, NY: Henry Holt and Company, 1938).

³³⁰ Hookway, "Pragmatism."

³³¹ Cahoone, *From Modernism to Postmodernism an Anthology*, 447. See comment on Richard Rorty’s “Solidarity and Objectivity?”

account of truth.”³³² He treated pragmatic maxim does not sustain systematical determination of truth. Both Rorty and Putman developed their own view of extended pragmatism as opposed to that of classical which maintained *pragmatic maxim* as the principle. Habermas developed his philosophy in the area of rationality of communication with speech act theory influenced from Wittgenstein, critical theory, and Hermeneutics. The recent movement of pragmatism is more analytic and become closer to Kant, Hegel, and Wittgenstein. However, with the relation to constructive postmodern philosophy as opposed to deconstructive postmodern philosophy such as Derrida’s approach, the origin was revived through the view of classical pragmatism especially regarding Peirce and James which shares the principle, *pragmatic maxim*.

In the field of architecture pragmatism is universally accepted with the relations to scientific method and inquiry in general. I propose a theory of architecture with the connection to pragmatism is needed in order to facilitate philosophy of architecture. Influence related to the area of Pragmatism including instrumental or practical aspects of philosophy can be seen in Weimar Bauhaus through Johannes Itten’s promotion of the methodology based on John Dewey’s ‘learning-through-doing’ approach. This emotional approach was replaced by the rational and anti-individual approach in De Stijl. In the theory of architectural language in 1970s Peircean semeiotic was incorporated to Saussurean semiology through theorist philosophy of language such as Umberto Eco and theorist of architecture such as Charles Jencks, Geoffrey Broadbent, and others. I argue whether the choice of base language system of architecture was inaccurately made by these theorists. In the recent years the influence from pragmatism to the field of architecture became revival stage. Turning to this century, “thing is making,” MOMA conference held in 2000.³³³ It applied non-linguistics practicality of architectural design. The meaning of architecture was treated after the detachment from linguistics use of

³³² See Cahoone’s comment on Hilary Putman. *Ibid.*, 592. In the introduction to Hilary Putman’s ‘Is There Still Anything to Say about Reality and Truth?’

³³³ Sarah Boxer, "The New Face of Architecture," *The New York Times*, <http://www.nytimes.com/2000/11/25/arts/the-new-face-of-architecture.html?pagewanted=all&src=pm>. Accessed November 2, 2012.

architectural vocabulary. Jean Ockman's "Pragmatist Imagination"³³⁴ (2000) provided the insight that architectural design is action with critical thinking, "thing is making." The role of pragmatism in architecture must be appropriately set for the body of knowledge in architecture. Therefore, I focus on the origin of pragmatism, which was found by Charles Sanders Peirce, and a theory of architecture through philosophy of language.

³³⁴ Joan Ockman, *The Pragmatist Imagination* (New York, NY: Princeton Architectural Press, 2000).

CHAPTER IV

POSTMODERN PHILOSOPHY

IV.1 Introduction

The parallel connection between postmodern philosophy and Peircean philosophy has been a subject of discourse.³³⁵ As I reviewed in the previous Chapter – *Influence of Philosophy on Architecture in the 19th through 20th Century*, philosophy has been influencing architecture in the modern and postmodern era. In this chapter, I will focus on specifically postmodern philosophy and its precursors including existentialism, structuralism, and post-structuralism.³³⁶ Philosophers deliberated to find conditions of postmodernism. I conceptualize the drastic postmodern thoughts that radicalize structuralism in order to shift toward post-structuralism. One of the key movements during postmodern period is to deal with human subjectivity lost in the period of structuralism. This subjective mind recovering can be the connection between postmodernism and Pragmatism through Peirce’s philosophy that deals psychology and conflicting mind. In the field of architecture, the relation between Peircean and post-structuralism will be critical for the interpretation of postmodern architecture.

Lawrence Cahoon summarizes the five characteristics of postmodern philosophy: (1) “postmodernists are critics of unity wherever it is claimed to appear: the unity of the world, of knowledge, of society, of the self, of the meaning of word”; (2) “postmodernism is the *denial of presence* or the immediate relation of human judgments to what they judge”; (3) “postmodernists are *constructivist* about knowledge; knowledge is something human made”; “the denial of presence and the acceptance of constructivism occasionally leads postmodernists to substitute the analysis of representation of thing for a discussion of *the thing*” such as the notion “there is nothing outside the text” by

³³⁵ Kai Nielson, "Peirce, Pragmatism and the Challenge of Postmodernism," *Transactions of the Charles S. Peirce Society* XXIX, no. 4 (1993): 513-60.

³³⁶ In some respect, postmodern philosophy is labeled as equivalent to post-modern philosophy. See, Introduction section of Cahoon, *From Modernism to Postmodernism an Anthology*, 1.

Derrida; (4) “the *immanence of norms*, including reason itself” leads the “denial of dualism, not only metaphysical but methodological”; (5) “a characteristics analytic strategy which is the complex application of the four themes [(1) through (4)] ... , and which is central to the politics of postmodernism.”³³⁷ The above stated five characteristics of postmodernism in philosophy are the influential motivation toward not only theoretical but also stylistic expressions of works of architecture. In short, postmodern philosophy is about how to deal with ‘truth’ and how to make ‘truth’ regardless natural and artificial. This truth determination is not readily available but possible with narrative, and hopefully legitimated.

The relation between Postmodernism and Pragmatism has been discussed. For example, John J. Stuhr describes that pragmatism can appropriate postmodernism.³³⁸ Kai Nielsen (born 1926) describes the transformation of philosophy from ‘First Philosophy,’ which is “grand tradition of philosophy” defined based on foundationalism and metaphysics, to philosophies of rejection of foundationalism.³³⁹ Nielsen categorized this movement as anti-fundamentalism consists of various contemporary philosophies including from positivism, phenomenology, and neo-Marxism. Nielson discusses this transformation was initiated by classical pragmatism and “carried on in different ways by neo-pragmatism with linguistic turn”, post-structuralists and Frankfurt School members.³⁴⁰ Setting postmodernist and pragmatists side by side, he inquires what postmodernists’ challenge was and “what of pragmatism can and should remain in the face of the postmodernist challenge.”³⁴¹ To this discussion and inquires Stuhr responds: “the real challenge, the important challenge now, is how pragmatism can appropriate or draw on the resources of postmodernism.”³⁴² The role of pragmatism contributes to the challenge

³³⁷ Ibid., 9-11.

³³⁸ John J Stuhr, "Can Pragmatism Appropriate the Resources of Postmodernism? A Response to Nielsen," *Transactions of the Charles S. Peirce Society* xxix, no. 4 (1993): 562-72.

³³⁹ Kai Nielson, "Peirce, Pragmatism and the Challenge of Postmodernism," *ibid.* XXIX: 513.

³⁴⁰ Ibid.

³⁴¹ Ibid., 515.

³⁴² John J Stuhr, "Can Pragmatism Appropriate the Resources of Postmodernism? A Response to Nielsen," *ibid.* xxix: 568.

of postmodernism and post-structuralism. It would be a similar condition in case of postmodern architecture and postmodern cultures in city.

The common ground between postmodern philosophy and pragmatism was focused on philosophers and theorists as a departure from Continental philosophies and was shifting of socio cultural structure. A social theorist David Harvey (born 1935) acknowledged pragmatist Richard Rorty (1931-2007) in his writing, *The Condition of Postmodernity* (1990). Harvey described Rorty was “one of the major U.S. philosophers in the postmodern movement, dismissing ‘the canonical sequence of philosophers from Descartes to Nietzsche...’.”³⁴³ This structural shift was evident in the argument Rorty made in his writing, *Philosophy and the Mirror of Nature* (1979)³⁴⁴ was “the developments of post-Heideggerian Continental philosophy and post-Wittgensteinian analytic philosophy.”³⁴⁵ Rorty’s blended pragmatism with postmodernism was needed for the affirmation of postmodern society by learning from its changing and shifting. Harvey describes that society “indicate[s] a wide spread a profound shift in ‘the structure of feeling.’”³⁴⁶ The commonality of both philosophical bases was entailed in the recognition of plurality of knowledge and the process of determination of knowing. They are opposed to foundationalism and authoritarianism. At the essential level, postmodern philosophy is critical for a pragmatism approach interpretation. An alignment of these two philosophies can be a meta-source for an interpretation of postmodern architecture through Charles Sanders Peirce’s philosophy, semeiotic, and logic. I will discuss postmodern philosophy with the influence from its precursor especially of structuralism and theory of language, the basic concept of postmodernism that takes binary oppositions, the conditions of postmodernism and structural change in spatiotemporal culture, the recovering subjectivity which is the relationship between human mind and whole system surrounding us, the form of postmodern philosophy that represents deconstructivist’ inclination to Saussurean semiology, the expression of

³⁴³ Harvey, *The Condition of Postmodernity*, 52.

³⁴⁴ Richard Rorty, *Philosophy and the Mirror of Nature* (Princeton, NJ: Princeton University Press, 1979).

³⁴⁵ See Introduction section of Cahoon, *From Modernism to Postmodernism an Anthology*, 7.

³⁴⁶ Harvey, *The Condition of Postmodernity*, 9.

postmodern form such as narrative structure and image association that is represented by the notion of simulacrum, and finally the role of pragmatism philosophy to postmodernism.

IV.2 Precursor of Postmodernism (Existentialism and Structuralism)

The precursor of postmodern philosophy is described as movements in continental philosophy after Emmanuel Kant. The earlier movements included Friedrich Nietzsche (existentialism), Karl Marx (critical), Sigmund Freud (psychoanalytic) who represent anti-utopianism, anti-power, and anti-rationalism thoughts. In the 1960s, existentialism, phenomenology, and psychoanalytic philosophers concerned “with the meaning of facts for human subjects” rather than merely factuality by itself.³⁴⁷ Such philosophers are Jean-Paul Sartre and Merleau-Ponty. During the 1960s in France, some of the intellectual movements reinterpreted Marx through Freud, Saussure, and Jakobson. They influenced structuralism and the 1970s and 1980s’ post-structuralism philosophy.

Philosophers of this movement approached differently from Sartre and Merleau-Ponty. They were influenced by structuralism that rejected “the centrality of the self and its development that had characterized Marxism, existentialism, phenomenology, and psychoanalysis.”³⁴⁸ Their understanding of human existence was based on “culture created self ..., [and] ‘code’ of cultural sign.” Therefore, “the supra-individual structure” such as language became the main part of philosophical concerns.³⁴⁹ The linguistics movement of Ferdinand de Saussure and Roman Jakobson, and anthropologist Lévi-Strauss are the main source of this influence; as well as logical positivism, analytic linguistics such as Ludwig Wittgenstein. The influence of structuralism is widely recognizable including art theory. In art theory, Hal Foster describes its self-regulated autonomous system such that “structuralism—the dominant French methodological position against which poststructuralism rebelled—had viewed any given human

³⁴⁷ Cahoone, *From Modernism to Postmodernism an Anthology*, 3.

³⁴⁸ *Ibid.*, 4.

³⁴⁹ *Ibid.*, 3-4.

activity—language, for example, or kinship systems within a society—as a rule-governed system is more or less autonomous, self-maintaining structure, and the laws operate according to certain formal principle of natural oppositions.”³⁵⁰ Structure contains binary oppositions that are essentially self-governed. But this binary system was questioned, its predictability as an indeterminable autonomous system because of openness of system that is opposed to the original definition of structuralism, self-contained system like language. In science, the positivist strain of postmodernism through Quantum theory led to the Chaos Theory. This shift has been called scientific postmodernism since the 1970s. Their tendency remains within structuralism as a phase of the humanistic theory.

IV.3 The Concept of Postmodernism

Opposed to the self-regulated autonomous trends, new philosophers in France in the 1960s such as Gilles Deleuze, Jean-François Lyotard, Jacques Derrida, and Michel Foucault refused the scientific aspect of structuralism. They radicalized structuralism as post-structuralism, emphasizing that human cultural construction is based on contextual self-reflective philosophy rather than a supra-individual cultural code system. In some respect, post-structuralists doubt normative form of truth and seek illusions instead. Their philosophy is identified as postmodern philosophy. In the following paragraphs, I will explore Friedrich Nietzsche who provided the basic concept of Postmodernism, Jean-François Lyotard who set basic conditions of Postmodernism, Michel Foucault who valued subjectivity, Gilles Deleuze who emphasized plurality, Jacques Derrida who radicalized Saussure, and Jean Baudrillard who provided new reality through simulacrum, regarding their inclination and concerns related to postmodernist theory. Furthermore, the concept of postmodernism induces the relationship between Postmodernism and Pragmatism in terms of their sharing and reciprocal task for the philosophical complementation needed each other.

³⁵⁰ Foster et al., *Art since 1900 Modernism Antimodernism Postmodernism*, 40.

Existentialist Friedrich Nietzsche (1844-1900) played an important role for postmodern philosophy and the expression of postmodern arts. His idea of oscillation, between frozen representation (*Apollonian representation*) and frenzy appearance (*Dionysian impulse*) triggered the postmodern art concepts.³⁵¹ Nietzsche described these oppositions in *The Birth of Tragedy*³⁵² as the fundamental elements of art creation. His nihilism with positive (plastic rationality) and negative (non-plastic irrationality) balance can be the source of creative process in the mode of oscillation. This oscillation indicated that reality is vaporized, and the “dissolution of the distinction between ‘real’ and ‘apparent’ world.”³⁵³ Nietzsche’s fundamental concept of “genealogical analysis” for postmodernist “forward[s] the hypothesis that scientific concepts are the chain of metaphors hardened into accepted truths.”³⁵⁴ This concept of *genealogy* influenced the concept of *repetition*, *simulacrum* among postmodern philosophers such as Baudelaire, Deleuze, and Foucault. Nietzsche’s other concept (*will to power*) was understood by Martin Heidegger as “the eternal recurrence as becoming.”³⁵⁵ It is plausible to understand that postmodernists owe their philosophical inclinations to Nietzsche regarding the notion of *difference*, *repetition*, and *eternal return*.

IV.4 Postmodernism Condition (Lyotard, Harvey, and Jameson)

The term *Postmodern* in philosophy was identified with the writing of *Postmodern Condition* (1979)³⁵⁶ by Jean-François Lyotard. He questioned the legitimacy of narrative knowledge through Wittgenstein’s language game³⁵⁷ in order to characterize the condition of postmodern plurality and uncertainty of knowledge. According to Lyotard this condition is defined “as incredulity toward meta-narrative.” Lyotard pointed out the uncertainty of knowledge legitimacy that is only capable with a

³⁵¹ Gary Aylesworth, "Postmodernism," in *The Stanford Encyclopedia of Philosophy* ed. Edward N Zalta (Summer 2013 edition). Accessed March 8, 2012, <http://plato.stanford.edu/entries/postmodernism/>.

³⁵² Friedrich Nietzsche, *The Birth of Tragedy and the Genealogy of Morals*, trans. Francis Golffing (Garden City, NY: Doubleday & Company, 1956).

³⁵³ Aylesworth, "Postmodernism."

³⁵⁴ *Ibid.*

³⁵⁵ *Ibid.*

³⁵⁶ Lyotard, *Postmodern Condition: A Report on Knowledge*.

³⁵⁷ Wittgenstein, *Philosophical Investigations*.

legislature—an authority within a language game. The unification of narrative knowledge is no longer available, and the loss of meta-narrative invited new disciplines to grow without the connection to old epistemology. Thus, “science only plays its own game and cannot legitimate others, such as moral presentation.”³⁵⁸ But, the loss of narratives requires a new unification of legitimacy in order to continue the reinvention of a knowledge production. This new continuity was called “*paralogy*” by Lyotard. He used the term *paralogy* to explain the *legitimation* process of knowledge with reflective and resistive form for the determination of unknown.³⁵⁹ The determination cannot avoid the process of *paralogy* paradoxically to justify unknown knowledge determination. The progress of *paralogy* invents a new paradigm and a new rule—new code system in changing a game. By this token, legitimacy is contentiously forced to be plural as the progress occurs with *paralogy* in a new game, and a compartment of knowledge in postmodern situation. Therefore, the method of judgment, for example aesthetic judgment, is inclined to be reflective rather deterministic. Lyotard did not negate the narratives of postmodern knowledge, but he set-up the condition of diversity to determine a meaning. The loss of grand narrative—end of universal knowledge requires a “local narrative” instead.³⁶⁰

Socio-cultural aspects of postmodernism conditions are discussed by David Harvey and Fredric Jameson. David Harvey discussed in *The Condition of Postmodernity*³⁶¹ with wide range in ‘*the shift of structural feeling*’ for postmodern society. He did not admire the illusion of postmodern feeling that is composed of labyrinth and simulacrum, but he accepted their existence that prevailed the feeling of postmodernism. He attempted to draw the cultural origin of this shift, the characteristic of postmodern condition, and the association to philosophies especially with historical materialism and socio-temporal compressions. Harvey discussed like Jameson with wider socio-cultural context

³⁵⁸ Aylesworth, "Postmodernism."

³⁵⁹ Lyotard, *Postmodern Condition: A Report on Knowledge*, 61.

³⁶⁰ Paul Sheehan, "Postmodernism and Philosophy," in *The Cambridge Companion to Postmodernism*, ed. Steven Connor (Cambridge, UK: Cambridge University Press, 2004), 29.

³⁶¹ Harvey, *The Condition of Postmodernity*.

including city, architecture, art, economy, politics, and philosophy. His criticism of postmodern neither it is for nor against, rather showed the willingness to accept with free mind setting in order to find a new reality. By doing so, Harvey found the limitation of historical materialism and the factual and structural change of society. One of the key representations of his acceptance is the compression in time and space. This includes many aspects such as production and economy exceeding cultural realm. Fredric Jameson's (born 1934) described postmodernism as "cultural logic of late capitalism."³⁶² His view of postmodernism is strongly associated with cultural domination of postmodernism. He started his grasp of postmodernism as "culture" that "has become a product its own right."³⁶³ Therefore for him, "postmodernism is the consumption of sheer commodification as a process,"³⁶⁴ and in the depth, he describes, "not as a style but rather as a cultural dominant."³⁶⁵ The capability in terms of cultural domination and dissemination is one of the major characteristics and conditions of postmodern society.

IV.5 Recovering Subjectivity (Nietzsche, Foucault)

Nietzsche's method of genealogy influenced Michel Foucault's theory of history, archaeological research that differentiates a spatiotemporal form. In this from, history as memories is transformed into a different strata format. The idea of genealogy was adapted by Foucault in order to research "the accidents and contingencies that converge at crucial moments"³⁶⁶ in transforming history into a totally different time and spatial construction. His power of subjectivity problematized modern epistemological knowledge. This format requires pluralistic form of histories that can correspond to Lyotard's postmodern definition—the refusal of meaning in grand meta-narratives and the rejection of normative historical fact. Meaning is no longer simply definable in this format, and the normative presupposition of meaning is no longer integrated in a sense.

³⁶² Fredric Jameson, *Postmodernism, or the Cultural Logic of Late Capitalism* (Durham, NC: Duke University Press, 1991).

³⁶³ *Ibid.*, x.

³⁶⁴ *Ibid.*

³⁶⁵ *Ibid.*, 4.

³⁶⁶ Aylesworth, "Postmodernism."

In the writing of *The Order of Things* (1966),³⁶⁷ Foucault provided the view of possible different layering system for words and things. *Words* mean ordering language, while *things* mean a perception of reality in a history. He used the *method of archaeology* to evaluate perceptions through Renaissance to Contemporary (1960s).³⁶⁸ His archeological layers showed the transformation for the progress of strata of history. His concept of transformation is paralleled to Hegelian *progression* although his concept is rather *regression*.³⁶⁹ In his format of Archaeology regarding language system, he showed a resemblance between Classical and Contemporary, and Renaissance and Modern *epistemes*.³⁷⁰ With Foucault, the layer of philosophy is transformed to archaeology from Theology (Renaissance), Rationalism (Classical), and Anthropology (Modern). The spatiotemporal concept of archaeology was examined by Foucault along with Thomas Kohn's concept of paradigm.³⁷¹ For Foucault the archaeology intended to explain the different structure of the relationship of time and space that triggers the investigation of the deep structure of knowledge. "Rather than focusing on what was known (history) or why knowledge is possible (epistemology), he investigated how fields of knowledge are structured."³⁷² By doing so, this method can reveal *difference* and *fragmentation* of truth as a whole, and a pluralistic perceptive meaning was created. These views are constructed by subjective reality that provides different set of specimens from that of normative, and that is originated from Nietzsche's genealogy.

IV.6 The Form of Plurality, Difference (Deleuze)

Gilles Deleuze (1925-1995) developed his theory of *difference* contrary to Kant, and in alignment with Hegel and Leibnitz. He was against Kantian self-justifying reason, and

³⁶⁷ Michel Foucault, *The Order of Things: An Archeology of the Human Science*, trans. Les Mots et les choses (New York, NY: Vintage, 1994 (1970)).

³⁶⁸ Major-Poetzl, *Michel Foucault's Archaeology of Western Culture*, 149.

³⁶⁹ *Ibid.*

³⁷⁰ *Ibid.*, 160. According to Major-Poetzl, in Classical and Contemporary epistemes, form determines contents, while that of Renaissance and Modern interprets modes of thought.

³⁷¹ Major-Poetzl, *Michel Foucault's Archaeology of Western Culture*, 86-90.

³⁷² *Ibid.*, 21.

developed reflective feeling³⁷³ called by him as sensibility that takes recursive form of multiplicity. This sensibility plays the role in the idea of difference that creates *simulacra* as *intensity*. His notion of *difference* and *repetitions* were formulated through Hegel and Leibniz in terms of infiniteness towards inward for Leibniz and outward for Hegel with multidirectional form of *eternal return* cycled by the concept of *intensity* and *extensity*. The idea of difference appears to be common among other postmodern philosophers such as Derrida's difference and *différance* that share the essential bases of plurality. For Deleuze, the form of difference does not take negation and does take *repetitions*.³⁷⁴ Also, *difference* is not multiple rather need to be created as singularity. His notion of repetition is contradictory and simultaneously a unified concept. His contradiction with unification was described as, "If repetition exists, it expresses at once a singularity opposed to the general, a *universality* opposed to the particular, a distinctive opposed to the ordinary, an instantaneity opposed to variation and an eternity opposed to permanence."³⁷⁵ According to Deleuze, "difference lies between two repetitions"³⁷⁶ which include *intensity* and *extensity* process. This process involves *in* and *out* dynamic differentiation—"a process of repetition understood as the passage from a state of general difference to singular difference, from external difference to internal difference—in short, repetition as the differentiation of difference."³⁷⁷ His theoretical structure of plurality is thus holding two axial cyclical directions, which is *intracyclic* and *extracyclic*³⁷⁸ with the differentiation processes, which is never ended as *eternal return*—reflective feeling. This cyclical endless repetition was explained by Deleuze: "the operation of systems subject to *eternal return*."³⁷⁹ He described this system involves an identity which is *projected* or *retrojected* on to difference and resemblance.³⁸⁰ This difference and resemblance has to be treated as interiority within

³⁷³ Aylesworth, "Postmodernism."

³⁷⁴ Ibid.

³⁷⁵ Deleuze, *Difference & Repetition*, 2-3.

³⁷⁶ Ibid., 76.

³⁷⁷ Ibid.

³⁷⁸ Ibid., 296.

³⁷⁹ Ibid., 126.

³⁸⁰ Ibid.

the system of divergence. His explanation includes twisted situation that identity requires projection and *retrojection* for both difference and resemblance in the situation of both interiority and exteriority. The exteriority is relevant to divergent which he can see in Hegel. Deleuze's notion of difference and repetition contains cyclical system with two directions, inward and outward, with partial resemblance. That turns as a new reality of singularity rather than negating pre-existing entities. This new reality is possible through self-reflective process.

IV.7 Deconstructivist and Saussure

Jacques Derrida (1930-2004) is one of the most influential postmodern philosophers regarding the idea of "*deconstruction*." His notions of *difference* and *deconstruction* were applied beyond the philosophy discipline, to include literature, art, and architecture. Derrida developed his theory examining Husserl's phenomenology,³⁸¹ structural linguistics, and Heidegger's mediation regarding non-presence of being.³⁸² In his writing, *Of Grammatology* (1974), he argued traditional logocentrism that sees speech as origin of text, as well as he argued Saussure's sound-concept relation did not explain the multiple dimensions of phonetic signifier function. His non-traditional logocentrism takes the form of interplay between speech and text, interiority and exteriority.³⁸³ His *difference* has two aspects including "*difference*" and "*differance (différance)*." He explained the concept of *arche-writing* with the addition of letter "a." "With its a, *differance* more properly refers to what in classical language would be called the origin or production of differences and the difference between differences, the play of differences."³⁸⁴ He thought difference resides in a relative measurement that can be *traced*. The meaning of *deconstruction* is marking of a *trace* of *difference* since we lost totality—center regarding a structure. According to Derrida, "the center is at the center

³⁸¹ Jacques Derrida, "Difference," in *From Modernism to Postmodernism: An Anthology*, ed. Lawrence Cahoon (Malden, MA: Blackwell Publishing, 2003), 225-40.

³⁸² Aylesworth, "Postmodernism."

³⁸³ Derrida, *Of Grammatology*.

³⁸⁴ "Difference," 226.

of the totality,” but we are facing the situation that “the center is not the center.”³⁸⁵ Therefore, the center is “either inside or outside.”³⁸⁶ His notion of interplay is based on the concept of non-origin—*origin as the end*, but no ending process of *deletion* and addition, which is the idea of repetitions. The interplay is to be conducted between *oppositions* such as *absence* and *presence* that is relevant to the signification system between *transcendental signified* and *metaphysics of presence*—desire of presence. Although, Derrida argued the limitation of Saussurean dyadic system as not multiple signification phonetic system,³⁸⁷ because of his preconception in need of *metaphysics of presence* as a kind of signifier, he needed to remain within this system. His system’s inclination was shown by the importance of ‘text’ and the aspect of functionality of language – *deconstruction* rather than that of semantics in his theory. Derrida’s theory provided the idea of plurality, difference, and repetitions similar to that of Deleuze. The influence from neo-Marxist philosopher Benjamin and Adorno—negative dialectics—constructed Derrida’s framework regarding deconstruction. Lacking of presence becomes always an origin of next desire. And this desire seems like not achievable to maintain continuously producing an ephemeral desire that makes things radically aestheticize reflectively through lacking.

IV.8 Simulacrum and Narrative Reality

In general, postmodern philosophy holds the essential characteristics to deal with indecisive truth, complexity, and contradiction in terms of the understanding knowledge, or creation of knowledge. The idea of *simulacrum* is itself contradictory and complex. *Simulacrum* is not just an image copy; it can reveal mythical connections to knowledge for postmodern philosophy. The common ground of postmodern philosophy can be considered with the notion of *simulacrum*, the reality of representation or image. Jean

³⁸⁵ *Writing and Difference*, trans. Alan Bass (Chicago, IL: The University of Chicago, 1978), 279.

³⁸⁶ *Ibid.*

³⁸⁷ *Of Grammatology*, 30. Derrida claimed that Saussure mistreated the function of writing “a narrow and derivative function.” The function of writing “exists for the sole purpose of representing” spoken language; “This representative determination, ... does not translate a choice or an evaluation, does not betray a psychological or metaphysical presupposition peculiar to Saussure.”

Baudrillard provided insightful investigation regarding *hyperreality* function of *simulacrum* through structuralism and Saussurean semiology. His argument was the issue of *reality*, which is replaced by *hyperreality*.³⁸⁸ While Deleuze explained, *simulacrum* produces the reality that is *realer than realer* in his notion of *difference and repetition*,³⁸⁹ Baudrillard defined *simulacrum* as deception that creates only nostalgia of illusion.³⁹⁰ Baudrillard pointed out the fundamental attribute of *simulacrum* that works as an iconic entity and similar to the idea of *simulation*. At the end of the process of simulation, reality turns to a pure simulacrum without having reference – self-referential iconic form of *simulacrum*. He sees death as an irreversible symbolic order³⁹¹ – pure *simulacrum*, and God himself became *simulacrum* with no reference.³⁹² Otherwise, in the realm of the law of equivalence according to Baudrillard, simulacrum has three orders: “the first-order simulacrum operates on the natural law of value, the second-order of simulacrum on the market law of value, and the third order simulacrum on the structural law of value.” His analysis of hyperreality was concerned with sign, symbol, and code. These were delivered from Saussurean signification system and the law of equivalence with his association to Marxist philosophy. Baudrillard’s insight contributed to postmodern philosophy; especially the idea of *simulacrum* should be emphasized. On the relation between postmodern philosophy, literature, art, and architecture, the idea of simulacrum was developed in the field of rhetoric and aesthetic. Philosopher Mario Perniola (born 1941) seeks a moment of truth and sensibility in *baroque effect*, concept of transit through *simulacrum*.³⁹³ Postmodern hermeneutics philosopher Gianni Vattimo (born 1936), who was a student of Hans-Georg Gadamer, explains postmodern philosophy as ontological hermeneutics to unify our situation

³⁸⁸ Jean Baudrillard, "From Symbolic Exchange and Death," in *From Modernism to Postmodernism: An Anthology*, ed. Lawrence Cahoone, Ian H. Grant (Malden, MA: Blackwell Publishing, 2003), 421-34. His basic assumption is that the function of reference follows the law of equivalence in terms of structural organization of sign.

³⁸⁹ Deleuze, *Difference & Repetition*.

³⁹⁰ Baudrillard, *Simulacra and Simulation*, 12. He described “Disneyland is a perfect model of all the entangled order of simulacra. It is first of all a play of illusions and phantasms.”

³⁹¹ Aylesworth, "Postmodernism."

³⁹² Baudrillard, *Simulacra and Simulation*, 4-5.

³⁹³ Aylesworth, "Postmodernism."

between heterogeneity and diversity in order to overcome modernity. Vattimo stressed reconstruction of this continuity needs the experience of rhetoric.³⁹⁴ As related to the expression of postmodern art, literature, and architecture, the use of *simulacrum* and rhetoric seems to be effective sources and methods, as same as for the field of philosophy in terms of theoretical instrument that relates to reality, and knowledge. The negative connotation of simulacrum was stated by Fredric Jameson as “the derealization of the whole surrounding world of everyday reality.”³⁹⁵ Jameson did not criticize postmodern culture but he observed critically and harshly that the phenomenon of postmodern culture is “the absorption of culture by the multinational capital, the final overcoming of the partial independence that art and theory had been permitted by earlier forms of capitalism.”³⁹⁶ Aestheticizing simulacrum is positive and negative in both representing the characteristic of postmodern culture.

The narrative reality of time concept was developed by Paul Ricoeur. As I described in the previous Chapter (III. 8), Ricoeur differentiated universal and objective time and personal subjective time. He called universal time as “cosmic time,” and subjective time as “lived time.” These two different concepts of time constitute “historical time” to make reality of narrative time, which generates our narrative experience. The connection between universality and locality can be bound collectivity within personal narrative reality and that of inter-personal. This narrative reality can be understood as a form of *simulacrum* that provides an imaginary hyper-reality. The pluralistic time concept through inter-subjectivity can be focused by the notion of narrative time and reality. This meaning of narrative experience is a source of expression of postmodern culture including postmodern architecture. The essential form of narrative reality however inevitably consists of the process of oscillation between diachronic and synchronic in addition to that of universality and locality. The meaning of experience is a matter of

³⁹⁴ Ibid.

³⁹⁵ Fredric Jameson, "From "the Cultural Logic of Late Capitalism"," in *From Modernism to Postmodernism: An Anthology*, ed. Lawrence Cahoone (Malden, MA: Blackwell Publishing, 2003), 567-68.

³⁹⁶ See Cahoone’s comment on Fredric Jameson. Cahoone, *From Modernism to Postmodernism an Anthology*, 564.

language originated from structuralism. The base of language theory must be shifted to language theory of post-structuralism, postmodern philosophy. This view leads us to the comparison of Ferdinand de Saussure's semiology and Peirce's semeiotic and the approach to the role of postmodernism and pragmatism.

IV.9 Postmodernism and Pragmatism

Postmodern philosophy showed the resistance towards grand meta-narrative, knowledge, and metaphysics.³⁹⁷ However, by holding this inclination does not mean a negation of this tendency and benchmarking the starting point toward knowledge. Postmodern philosophy in general is dealing with the uncertainty of knowledge and is skeptical in knowing, the commonality between pragmatism thoughts and that of postmodern philosophy can be stated as the refusal of foundationalism. For both postmodern and pragmatism the origin of knowledge is not *a priori* and needs to be proceeded. Apparently, the suspicion to the origin and the center of knowledge has shifted postmodernists' philosophical basis to the system of language and linguistics with structuralism through supra-individual insights first, then moved to a fluidity of post-structuralist annihilation that knowledge is no longer stable. Postmodern philosophy was concerned with the function of knowing, and the methods of knowing instead of knowledge itself. If these dispositions of postmodern philosophy become the resource for philosophy of pragmatism, the interpretation of postmodern philosophy through pragmatism can suggest a better understanding of the application of postmodern philosophy on the field of knowledge in architecture, and philosophy of architecture. John Stuhr's suggestion to pragmatism to use *the resources of postmodernist* was made due to his response to Kai Nielson's comparative observation on roles of postmodernism and pragmatism.³⁹⁸ The parallel connection between Peircean philosophy and postmodernism was discerned by Kai Nielson. He attempted to understand "what philosophy should be and indeed can reasonably be after the undermining of

³⁹⁷ Paul Sheehan shows postmodernism linked with the end of philosophy which is metaphysics, narrative, reality, and identity. See, Sheehan, "Postmodernism and Philosophy." 20-42.

³⁹⁸ Stuhr, "Can Pragmatism Appropriate the Resources of Postmodernism? A Response to Nielsen."

foundationalism, metaphysics, and anything like a First Philosophy” through Peirce and Pragmatism’s rejection of foundationalism, and that of postmodernist.³⁹⁹ He called thinkers such as Derrida *pragmatic postmodernists*. In some respect, it can be understood that Nielson approached the role of postmodernist that needs the method of pragmatist while Stuhr pointed out the needs of *contents* for pragmatist. Peirce as the origin of pragmatism stated the notion of *Pragmatic Maxim* that can conceptualize the possible clarification of meaningfulness bearing practicality of context such as community without authoritarian force and nominalism. The *self-reflexivity*⁴⁰⁰ of postmodern philosophy can share the idea for pragmatism to avoid nominalism and determinism. In this respect, Peircean philosophy is aligned with original postmodern philosophy that refuses foundationalism and authoritarianism. An opportunity to use the *method* of Peircean interpretation for postmodern architecture, *contents* for pragmatism is plausible and valuable. In the following Chapter – *Saussurean Postmodern Architecture*, I will describe this *content* of postmodern philosophy—postmodern architecture that followed Saussure, structuralisms, and post-structuralism since the 1960s.

The sign theorist Charles W. Morris (1901-1979) and Umberto Eco (born 1932) played important role for the development of postmodernism in architecture. The influence from Peirce’s sign theory onto behaviorist and postmodernist sign theory was through these philosophers. Peircean semeiotic and Saussurean semiology was set side by side for the development of language theory of postmodernism in architecture in the 1970s. The comparison between Peirce and Saussure is essential in order to define the roles between Pragmatism and Postmodernism. Allow me to recall that Peircean pragmatism was strictly based on his notion of ‘Pragmatic Maxim,’ while Saussurean semiology includes structural linguistics that influence on structuralism and later post-structuralism. Postmodern philosophy shares many aspects with post-structuralism such as regarding

³⁹⁹ Kai Nielson, "Peirce, Pragmatism and the Challenge of Postmodernism," *ibid.* XXIX: 513.

⁴⁰⁰ Self-reflexivity and self-reflexive structure of postmodern is explained. See, Steven Conner, *Postmodern Culture: An Introduction to Theories of the Contemporary* (Oxford, UK: Basil Blackwell, 1989), 5-7.

knowledge. According to Cahoone “they have in mind that this movement [of postmodernism in the 1960s] denies the possibility of ‘realist’ knowledge, objective knowledge, ... ‘univocal’ (single or primary) meaning of words and texts,”⁴⁰¹ Now then, the similarity and difference between pragmatism and postmodernism can be assessed by researching fundamental system of semeiotic and semiology. Regarding this important point I will discuss through *Saussurean Postmodern Architecture* (Chapter V), *Peircean Semeiotic and Logic* (Chapter VI), and *Peircean Postmodern Architecture* (Chapter VII).

⁴⁰¹ Cahoone, *From Modernism to Postmodernism an Anthology*, 1.

CHAPTER V

SAUSSUREAN POSTMODERN ARCHITECTURE

V.1 Introduction

While postmodern philosophy pursues uncertain knowledge as indeterminable or pluralistic, the characteristic of postmodern architecture belongs to the expression of this unknowable and uncertain feeling and the reaction to the modernism architecture, which pursued functionalism and formalism. On the aspect of oscillation between rationalism and romanticism, the direction of postmodernism appears to be a shifting process toward romanticism. But, this process includes counter romanticism as well. The situation is not a one way reaction; it is rather a twisted process of many shifts between rationalism and romanticism. Adapting the philosophy of language, architectural theorists show rational their mind by presuming a similarity between verbal language and non-verbal sign of architecture. The way of this adaptation was made rationally through the language in postmodern architecture with the presupposition that architectural form conveys the meaning of architecture. However controversially, the system of language holds innate irrationality that provides emotional expression such as poetical form, which can be relevant to Saussurean notion of *parole*. In this chapter, I will discuss the mode of language applied to postmodern architecture. I will call this mode as *Saussurean postmodern architecture*. However, the complete definition of this new term must be verified after the completion of defining the *Peircean postmodern architecture*, which will be discussed in the Chapter VII. I will analyze the mode of Saussurean postmodern architecture by recalling the essence of original structural linguistics, structuralism, and post-structuralism.

Like oscillation between rationalism and romanticism, we can observe two distinctive but relevant developments of postmodern architecture in the U.S.A. and Europe. The remarkable turn from modernism to postmodernism in architecture was the writing of

Robert Venturi's *Complexity and Contradiction in Architecture* (1966)⁴⁰² which presented a theoretical anti-modern treatise in the United States⁴⁰³ and the new interpretation of function as oppose to modernism functionalism in Italian neo-rationalism through a work of Aldo Rossi described in *The Architecture of the City* (1982, English version).⁴⁰⁴ Venturi preferred the visual complexities and contradictions from the Mannerist, Baroque, and Rococo Periods while the essential idea of postmodernism as individual was expressed. On the one hand, the influence of Venturi generated postmodern historicism, figurative architecture, and eclecticism such as the works of Michael Graves and Robert A.M. Stern, and on the other. Venturi became a precursor for an enigmatic form of deconstructivist style such as the works of Daniel Libeskind. This style follows Derrida's notion of *deconstruction*. Rossi projected architecture in typology with function that embeds events and process. Rossi's concept was called 'locus.'⁴⁰⁵ His theory was synchronized with the new concepts that Peter Eisenman developed as the new meaning of history that was composed of events and memory. Rossi invented analogical method along with Ferdinand Saussure's semiology dealing with the collective memory, which signifies the typology, while Eisenman developed an autonomous formal system of architecture based on the Chomsky's linguistics theory.⁴⁰⁶ The popularity of 'postmodern architecture' was disseminated in the 1970s and 1980s by Charles Jenks' writing and connection to the language of architecture with structural linguistics especially, that of Saussure.⁴⁰⁷ While the language of postmodern architecture connected to Saussure, the theory was extended to a behaviorism sign theory such as that of Charles W Morris and his successors including

⁴⁰² Venturi, *Complexity and Contradiction in Architecture*.

⁴⁰³ This major turn was accepted by many scholars by quoting Vincent Scully's Introduction to *Complexity and Contradiction in Architecture*—"probably the most important writing on the making of architecture since Le Corbusier's *Vers une Architecture* of 1923." See, for example, Kruft, *A History of Architectural Theory from Vitruvius to the Present*, 440.

⁴⁰⁴ Rossi, *The Architecture of the City*.

⁴⁰⁵ *Ibid.*, 46.

⁴⁰⁶ Geoffrey Broadbent, "A Plain Man's Guide to the Theory of Signs in Architecture," in *Theorizing a New Agenda for Architecture: An Anthology of Architectural Theory 1965-1995*, ed. Kate Nesbitt (New York, NY: Princeton Architectural Press, 1996), 124-40.

⁴⁰⁷ See for example, Geoffrey Broadbent, Richard Bunt, and Charles Jencks, *Sign, Symbols, and Architecture* (New York, NY: John Wiley & Sons, 1980).

Umberto Eco. From Morris' notion the influence from Charles Sanders Peirce is evident. However, I claim that influence was not essentially that of Peirce, it is rather similar to Saussurean origin language structure. I will discuss semiotic theorists' notions in order to determine their logical inclination between Saussure and Peirce. This determination is critical in order to understand the language of architecture. Also, this is relevant to the long discussion in philosophy of language, that is, the principal structure of language signification system.

Many critics on postmodern architecture demised its figure and features. I discern the demise of these kinds is from two reasons: (1) theory of postmodern architecture was made false, or (2) postmodern architecture did not follow theory of postmodern architecture correctly, if both (1) and (2) are not false. If (1) and (2) are both false, there can be other ways to explain postmodern architecture that was at least vital architectural expression at the time. This point of view is a total negation of postmodern architecture, and this validation must be done beyond this research and beyond the historical fact that we had an era of postmodern architecture. Rather, we must recapture a new explanation of language of architecture through Peircean interpretation of postmodern architecture. I will explore this view in Chapter VII (*Peircean postmodern architecture*). To prepare the above arguments I will analyze the characteristic of postmodern architecture through works of architecture. Postmodern architecture is not a single style; it is a movement composed of different features of architecture. I observed the categories of work of postmodern architecture including: (1) scenographic postmodern, (2) contextual postmodern and (3) deconstructivist postmodern. Postmodern architecture contains many aspects; therefore, a work of architecture would not exclusively belong to one of these three categories. It would be combined element of categories in many cases. I will describe the similarity in terms of architectural language between scenographic postmodern and deconstructivist postmodern—positive and negative scenographic. I will focus on the comparison between (1) scenographic postmodern and (2) contextual postmodern in order to verify the interpretation of postmodern architecture in the 1970s and 1980s. During this period, a language of postmodern architecture was developed.

The interpretation language of architecture will be through Saussure in this chapter, and Peirce in the Chapter VII.

V.2 Critic of Postmodern Architecture

The criticism of postmodern architecture (1960s–1980s) was renouncing the value of postmodern historicism, figurative architecture, and eclecticism. The intentionality of scenographic postmodern architecture generated the discrepancy between original intension and the reflection form its architectural style. For example, Michael Graves intended to express humanity via figurative language of architecture.⁴⁰⁸ The aim to restore a meaning of architecture by figurative architectural language was criticized as populism that borrowed classical architectural vocabulary.⁴⁰⁹ In spite of this critique, Norberg-Schulz's affirmation of figurative architectural language along with existentialism approach for the figurative architecture was made. Some of the posted arguments are regarding the practical use of architecture on a commercial basis by means of postmodern style. The dissemination of postmodern style increased the criticism in terms of the lack of ethical consideration. Hal Foster, Diane Ghirardo, Karsten Harries, and others proclaimed this criticism.

One of the arguments of postmodern historicism is regarding the problem of representation. Hal Foster explained the characteristics of fiction regarding the reality of meaning that is the issue of representation.^{410 411} Fredric Jameson's critic was regarding the lack of authenticity in postmodernism form, pastiche form, and depthless imaginary simulacra. Although he is optimistic about postmodern culture development process; observing controversially as the celebration of postmodern development that became absorption of late capitalism.⁴¹² Postmodern pastiche form was denounced by Alexander

⁴⁰⁸ Michael Graves, "A Case for Figurative Architecture," in *Theorizing a New Agenda for Architecture: An Anthology of Architectural Theory 1965 – 1995*, ed. Kate Nesbitt (New York, NY: Princeton Architectural Press, 1996 (1982)), 84-90.

⁴⁰⁹ Norberg-Schulz, "Michael Graves and the Language of Architecture," 7-14.

⁴¹⁰ Foster et al., *Art since 1900 Modernism Antimodernism Postmodernism*.

⁴¹¹ Hal Foster, "(Post)Modern Polemic," *Perspecta* 21(1984): 144-53, 50.

⁴¹² Jameson, *Postmodernism, or the Cultural Logic of Late Capitalism*.

Tzonis. He criticized these forms as ‘*citationism*’ by deforming authentic classical form.⁴¹³ Postmodern historicism was not an ideal poetical form of architecture for him. Similarly, Diane Ghirardo criticized the stylistic aspect of postmodern historicism in which architecture become simply ‘style’ and ignores modern consideration of materials, fabrication, and technology. Borrowing architectural vocabulary from classic, postmodern historicism is commercial consumption and became ‘fashion.’⁴¹⁴

In the context of critical regionalism, Kenneth Frampton does not accept postmodern historicism. Frampton reject simple vernacularism without having self-criticism. This critical engagement of self must lead an identity as self-awareness, which helps the process of counter emancipation from ethnicity. Similarly self-critic abstains from stylistic postmodern historicism, which was adapted by commercialism and became “the proliferation of roadside kitsch,” and “billboard facades.” Frampton proclaimed that these are “universal triumph of non-place urban realm” which should “be modified through a profound consciousness of history and rigorous socio-cultural analysis.”⁴¹⁵

Eclectic postmodern language is being questioned similarly. Phenomenologist Karsten Harries followed the aesthetic language problem, which is caused by the problem of representation. He held the question whether architecture should be understood as interpretation. He negated abstract theories to solve the architectural problem of meaning based on Heidegger’s notion of dwelling.⁴¹⁶ These critics have approached the aesthetic and language problems of postmodern style in the notion of ‘decorated shed’ that Venturi advocated the functionality of decoration – sign function.⁴¹⁷ Therefore, we must recall the essential issue regarding sign theory on postmodern architecture. The investigation is about the process of adaption of sign theories, the recognizable commonalities of theory, and the influence on the development of postmodern

⁴¹³ Tzonis and Lefaivre, *Classical Architecture: The Poetics of Order*, 279.

⁴¹⁴ Diane Ghirardo, "Past or Post Modern Architectural Fashion," *Journal of Architectural Education* 39, no. 4 (1986).

⁴¹⁵ Frampton, "On Reading Heidegger."

⁴¹⁶ Karsten Harries, *The Ethical Function of Architecture* (Cambridge, MA: MIT Press, 1997).

⁴¹⁷ Robert Venturi and Denise Scott Brown, *Learning from Las Vegas* (Cambridge, MA: The MIT Press, 1977).

architectural theories and the work of architecture. The criticized legitimation of postmodern architecture whether caused by morality of postmodern architectural style or the way of understanding of postmodern architectural theory needs to be questioned.

V.3 Saussure and Postmodern Sign Theories (Broadbent, Jencks, Richard Bunt, and others)

When enlightenment is over, the way of language became a replacement of our thought of method in the various cultural fields including architecture. Language of architecture is generally called as “the semiotics of architecture, a branch of the semiotics of visual communication” that is “closely related to aesthetics, to the semiotics of objects, and to proxemics, the semeiotics of space.”⁴¹⁸ The development of semiotics was made by philosophers of language originated from Saussurean semiology (structural linguistics) and Peircean semeiotic (pragmatism philosophy). Structural linguistics was developed under the influence of structuralism then turned to associate with post-structuralism during the time of postmodernism. The philosophers of language including Louis Hjelmslev, Roland Barthes, and Roman Jakobson can be categorized as Saussurean origin that holds dyadic model of language.⁴¹⁹ Peircean semeiotic continued to be interpreted by the follower of this theory including Charles Morris, and Umberto Eco. In the field of architecture following these philosophers, postmodern architecture as a vehicle of meaning gained the popularity of style in eclectic, free style of architecture in the 1970s and 1980s. Sign theory of postmodern architecture was formed by the *code system* that was originated from semiology of Ferdinand de Saussure.⁴²⁰

In the late 1960s language of architecture was conceptualized by Charles Jencks and George Baird. They introduced Saussurean semiology in order to explain architecture as

⁴¹⁸ Nöth, *Handbook of Semiotics*, 435.

⁴¹⁹ *Ibid.*, 88. Except Roland Barthes, all named philosophers are in the list of Synopsis of dyadic models of the sign. Roland Barthes was influenced from Saussure and further developed non-verbal communication. However, semiology is “subbranch of linguistics.” This is opposing to Saussure’s view. See Clarke, *Source of Semiotic: Reading with Commentary from Antiquity to the Present*, 139.

⁴²⁰ “The new science of semiology was invoked by Jencks in the first article [Meaning in Architecture], and its possible relationship to architecture was shown. His main source was the Course in General Linguistics by Ferdinand de Saussure.” See Klassen, *Architecture and Philosophy*, 6.

a meaning generator and readable text with sign that follows verbal language system that contains, for example, *langue* and *parole* system.⁴²¹ In their theory *langue* is an entire system of architecture and *parole* is an individual work of architecture. *Langue* deals with whole system, while *parole* is associated with a private utterance in Saussurean linguistics system. Linguistics system belongs to semiology, which is an inclusive cultural language beyond verbal language. Architecture is a part of cultural phenomenon, thus it can be a part of semiology, if semiology is the only the *langue*. I claim it is not in the next two chapters (*Peircean Semeiotic and Logic*, and *Peircean Postmodern Architecture*). By accepting this assumption, Jencks and Baird provided “preliminary semiotics of architecture elaborates the basic structuralist insight.”⁴²² Charles Jencks proclaimed his language of postmodern architecture that has pluralistic meaning with ‘double coded’ sign system.⁴²³ Jencks indicated simultaneous double coded such as modernism architecture and that of traditional local architecture. Thus, the foundation of *code system* primary consist of two entities relations that are correspondence of *signifier* and *signified*. Architectural theorists including Geoffrey Broadbent, Richard Bunt, Juan Bonta, and Charles Jencks adapted semiology to a language theory for the theoretical support of postmodern architecture in the 1970s through 1980s.⁴²⁴ In this adaptation, philosopher Umberto Eco influenced them with his *sign function theory*. Their theory is similar to the Saussurean system rather than Peircean system in spite of the influence from Peircean origin. I argue this point whether philosophers including Charles Morris and Umberto Eco did not follow original Peircean semeiotic theory. I will explore this consideration regarding the appropriateness of sign theory that explains language of architecture, typically of postmodern architecture that emphasized a language theory of architecture as a method and theoretical underpinning of architectural expression. Current architectural language theory did not unfold this explanation.

⁴²¹ Charles Jencks and George Baird, "'La Dimension Amoureuse' in Architecture " in *Architecture Theory since 1968*, ed. K. Michael Heys (Cambridge, MA: The MIT Press, 2000 (1969)).

⁴²² See Michael K Hays’ comment to "'La Dimension Amoureuse' in Architecture" from Charles Jencks and George Baird, *Meaning in Architecture* (New York: George Braziller, 1969) " Hays, *Architecture Theory since 1968*, 36.

⁴²³ Jencks, *New Paradigm in Architecture: The Language of Post-Modernism*, 26-28.

⁴²⁴ Broadbent, Bunt, and Jencks, *Sign, Symbols, and Architecture*.

The fundamental structure of Saussurean semiology is innate dyadic system that defines the structure of twofold language system, signifier and signified. One of the precursors of postmodernism is structuralism that defines the meaning of system by structure. Essentially analogy of language structure of verbal communication and architectural communication was assumed.⁴²⁵ This system is universally applicable to many fields and subsequently turned to post-structuralism which are not universal for the application, since *the grand narrative knowledge* is not available or at least is called into a question. When post-structuralism become foreground, the twofold relation became uncertain and structure is not the condition to define a meaning universally. The legitimacy of narrative knowledge is only available at the local level. That means the mode of language and knowledge is still based on the specification of twofold structure that is benchmarked at the structuralism foundation. This structuralism was developed aligning with Saussurean linguistics theory which is a part of semiology that was aimed to apply beyond verbal language. This Saussurean system has a function of signification with the two entities that includes *sound image* and *concept*. In his original theory, phonetic sound represents concept of meaning, which composes ‘*linguistic sign units*.’ That explains sound is *signifier* and meaning is *signified*.⁴²⁶ Saussure’s theory indicates that language consists of *diachronic* and *synchronic* realms of verbal language. Diachronic language is a *succession of history* while synchronic is *simultaneities’ relation* that further consists of ‘*langue*’ and ‘*parole*.’ The notion of *langue* is associated with the use of language while *parole* is related to the evolution of speaker’s speaking.⁴²⁷ The role of parole is a new invention of architectural style. For example, Michael Graves invented his figurative architecture along with classicism style modification.

During the development of postmodern architectural theory language of architecture becomes almost the foundation of architectural expression. This theoretical underpinning was established through the philosophy of language including Jakobson, Donald Preziosi,

⁴²⁵ Neil Leach, "Structuralism," in *Rethinking Architecture: A Reader in Cultural Theory*, ed. Neil Leach (London, UK: Routledge, 1997), 163-64.

⁴²⁶ Saussure, *Course in General Linguistics*, 66-67.

⁴²⁷ *Ibid.*, 77.

Charles Morris, Umberto Eco, Roland Barthes, Noam Chomsky, and others. The model forms originated from semiology are utilized in a theory of language of postmodern architecture by philosopher Umberto Eco and theorists in architecture. Their notion is called 'semiotic' or 'semiotics' that is similar to Peircean 'semeiotic.' But, the structure of sign logic is questionable as the same. Postmodern architecture theorists were not cautious about this point. Rather they focused on functionality of sign for architecture for the immediate need that is a rational aspect of oscillation omitting that of emotional. Therefore, architecture can be only as sign boards in this respect. Obviously, architectural complexity is not limited with this mind setting. The functionality aspect of sign theory was developed by behaviorist sign theorists including Charles W. Morris and Umberto Eco. Current language theory in architecture is along this line followed by theorists in architecture.

The influence of Eco on architectural theorist regarding code system is originated from two philosophers, namely Louis Hjelmslev and Medieval philosopher Ockham in addition to Charles Morris' behavioral semiotics. Louis Hjelmslev (1899-1965) developed his theory with structuralism influenced by Saussurean semiology tradition.⁴²⁸ His dyadic model explained signifier-signified relation as expression-contents. Eco was influenced by Hjelmslev⁴²⁹ who developed a nonverbal communication system that Saussure left out of his theory, and Ockham's signification model.^{430 431} Both Hjelmslev and Ockham hold twofold universal view of their sign theory. Hjelmslev's theory of sign was developed from Saussurean signification system, signifier and signified that correspond to sound image and concept. Hjelmslev renamed these Saussurean two-fold as *expression* and *contents*. These two sides were further stratified

⁴²⁸ Nöth, *Handbook of Semiotics*, 66.

⁴²⁹ *Ibid.*, 65.

⁴³⁰ William of Ockham was a medieval philosopher who thought "the universal is two-fold: natural and conventional." A natural sign predicates many things. For example, natural sign is "smoke naturally signifies fire," and "the conventional universe is one by voluntary institution." See Clarke, *Source of Semiotic: Reading with Commentary from Antiquity to the Present*, 29-31.

⁴³¹ Umberto Eco, *A Theory of Semiotics* (Bloomington, ID: Indiana University Press, 1976).

by Hjelmslev as *form* and *substance*.⁴³² Thus, Hjelmslev's model has four categories and two-side hierarchies essentially. Eco followed this definition for his architectural sign model called: *expression-from*, *expression-substance*, *content-form*, and *content-substance*.⁴³³ This is rigorously no more than a dyadic sign system. His theory of connotation, which formalized dyadic relation of connotation and denotation, influenced many dyadic semiotic theorists, "whose theory of connotation has become the basis of a semiotic school of aesthetic and literature theory."⁴³⁴ Eco is one of them. Ockham specified the relationship of his signification system between concept, word, and sign. He stated this relation: "words are used to signify those same things that are signified by the concepts of the mind."⁴³⁵ The system shows essentially two pairs of dyadic signification. Eco theorized these influences in his representative work, *A theory of Semiotics*⁴³⁶ with combining the adaptation of the notion of sign vehicle that Charles W. Morris developed in his behavioral sign theory.⁴³⁷ Morris constituted a triadic theory of sign including *semantics*, *syntactics*, and *pragmatics* along with Peircean semeiotic theory. His behaviorist interpretation of Peirce's sign theory influenced the view of Peircean sign theory for Eco, Thomas Sebeok (zoo semiotics), and the succeeding architectural theorists. However, Morris' triadic sign system was called into a question regarding the proximity of structure to the original Peircean semeiotic triadic system. For example, American Pragmatist John Dewey claimed Morris' modification of Peircean view was inappropriate. Dewey argued the use of Morris' term, *pragmatics* and Morris' interpretation of Peirce's triadic semeiotic to "three dyadic dimensions" and the changing the term *interpretant* as *interpreter*.⁴³⁸ At the time Morris actually interpreted interpretant as human interpreter. In Peircean sense this would be one of the cases. *Interpretant* is not necessary to be a human interpreter, but a human interpreter can be

⁴³² Nöth, *Handbook of Semiotics*, 64-66.

⁴³³ *Ibid.*, 438.

⁴³⁴ *Ibid.*, 71.

⁴³⁵ Clarke, *Source of Semiotic: Reading with Commentary from Antiquity to the Present*, 30.

⁴³⁶ Eco, *A Theory of Semiotics*.

⁴³⁷ Charles W Morris, *Signs, Language and Behavior* (New York, NY: Prentice-Hall Inc., 1946).

⁴³⁸ John Dewey, *Later Works 1925-1953*, vol. 15 (Carbondale, IL: Southern Illinois University Press, 1981), 141-52, 331-32.

one of *interpretants*. Apparently, Morris' logic was shifted from Peircean inclusive logic to exclusive logic for the deterministic purpose of Behavior Science. Morris called this functional role to determine meaning of sign as "*designatum*." Dewey claimed: "As Morris's translation of 'interpretant' into a personal user as its interpreter turns Peirce's view upside down, so his formulation of semantic, or the relation of signs to 'things,' is so contrary to what Peirce says on the latter subject as to make nonsense of it."⁴³⁹ Peirce's linguistic sign constructed with relativity while Morris' semiotic is based on deterministic dyadic relations. His theory of sign vehicle contains three sets of dyadic relations including: semantics that is semantical dimension, syntactics that is syntactical dimension, and pragmatics that is pragmatistical dimension. For Morris these three dimensions are semiosis called sign vehicle, designatum, and interpretant. The term semiosis and interpretant are coined by Peirce with a different meaning, upside down. However, relativity of sign maybe remains in the case of sign vehicle that conducts syntactical dimension of sign. Eco uses this aspect to construct his sign theory approaching functionality of sign.

Umberto Eco's *A theory of Semiotics* inherently influenced Peirce through Charles Morris' interpretation of Peircean semeiotic and pragmatism. Like Roland Barthes, Eco adapted the notion of connotation from Hjelmslev for his basic semiotics structure. A pairwise of expression and contents creates hierarchical structure of his theory that consists of two functions of sign: connotation and denotation. Eco's primary function, which deals utilitarian aspect, complies with denotation, while secondary function, which deals historical and aesthetic aspects, complies with connotation.⁴⁴⁰ He developed '*the theory of code*' based on this structure. He interpreted Peircean term, interpretant as *marker* within code system, and "interpretant goes beyond those of denotation and connotation." His assumption was that "semantic markers" called '*sememe*' were "possible interpretants."⁴⁴¹ The role of interpretant is a marker to be imbedded in

⁴³⁹ Ibid., 145.

⁴⁴⁰ Nöth, *Handbook of Semiotics*, 436.

⁴⁴¹ Eco, *A Theory of Semiotics*, 70.

connotation and “underlining denotation.”⁴⁴² This structure allows him to continue to use dyadic system involving Peircean interpretant, the key notion of triadic system. In Eco’s system, meaning is coded as a *cultural unit* which is intellectual sematic unit, and the “recognition of the presence of these cultural units (which are therefore the meaning to which the code makes the system of sign-vehicles correspond) involved understanding language as a social phenomenon.”⁴⁴³ The basic structure of his theory is dyadic and maintains linear system with hierarchy. His notion of semiosis is from that of Peirce contains: sign, object, and interpretant. He was aware of Peirce as “more comprehensive and semiotically more fruitful.”⁴⁴⁴ But, he stayed on dyadic system accepting Morris’ three dyadic structures and stressed the idea of interpretant as interpreter.⁴⁴⁵ The consequence of this process, I argue, led misguided Peircean triadic semeiotic for the application to architectural language theory in the 1970s. Therefore, a truer architectural language has yet to be uncovered.

In the mode of language of architecture, it became commonly acceptable that architectural form convey the meaning of architecture. The form as signifier and meaning as signified corresponded to the theory of semiology. The basic structure of his mode was defined generally by the binary notions including Saussure, Jakobson, Morris, and Eco. The commonality of above sign theories are imbedded dyadic structure in the hierarchy of their sign logic and system. The foundation of this system was associated with mimesis, which takes correspondence pair between symbol and meaning. Even if the degree of stableness of this relationship was questioned after Saussurean semiology, the basic structure is still in the same mode. The dyadic language theory is predominantly influential on theories of language of architecture. Two relevant publications on architectural language in 1980 can be selected for the inauguration of language of architecture. The first publication dealt with the sign theory of architecture

⁴⁴² Ibid.

⁴⁴³ Ibid., 67-68.

⁴⁴⁴ Ibid., 15.

⁴⁴⁵ Ibid., 14-16.

following a previous treatise on ‘*Meaning in Architecture*’⁴⁴⁶ published in 1969. Geoffrey Broadbent, Richard Bunt, Charles Jencks, and others reported semiotics of architectural language by taking models of sign symbol system from Ferdinand de Saussure and Charles Sanders Peirce in ‘*Signs, Symbols, and Architecture*’⁴⁴⁷ The second publication was from a behavior psychology point of view regarding a meaning of built environment. Geoffrey Broadbent, Richard Bunt, Tomas Llorens, and others made a research report on the relationship between architectural language and built environment from psychological aspects in ‘*Meaning and behavior in the built environment*.’⁴⁴⁸ Since the publication of ‘*Meaning of Architecture*’ language theory of architecture gained the position in the realm of architectural research discipline in the light of psychology and philosophy of language.

In ‘*Signs, Symbols, and Architecture*,’ Saussure’s semiology was accepted as *general theory of sign* just as Saussure said in his ‘*Course in General Linguistics*.’ Broadbent emphasized the synchronic and signification aspects of Saussurean semiology in his introduction.⁴⁴⁹ The idea of categorization is general in many cases for our thoughts. Broadbent narrowed Peircean semeiotic (he called ‘semiotic’ instead) to three different types of sign including icon, index, and symbol. Unfortunately, this over simplified reduction was the way to access Peircean theory at the time. For example, these three types of sign were discussed without describing *three modes of being* which makes major part of Peircean theory. Their theory distorted Peircean theory and invited a false understanding of triadic Peircean semeiotic that is equivalent to Saussurean semiology. In this publication Umberto Eco played a major roll through his theory regarding the functionality of sign. His sign has two-level functionalities that include primary function of sign and secondary function of sign along with the notion of architecture as

⁴⁴⁶ Charles Jencks and George Baird, *Meaning in Architecture* (New York, NY: George Braziller, 1969).

⁴⁴⁷ Broadbent, Bunt, and Jencks, *Sign, Symbols, and Architecture*.

⁴⁴⁸ Geoffrey et al. Broadbent, *Meaning and Behavior in the Built Environment* (New York, NY: John Wiley & Sons, 1980).

⁴⁴⁹ Broadbent, Bunt, and Jencks, *Sign, Symbols, and Architecture*, 1-4.

communication.⁴⁵⁰ Hjelmslev's theory of connotation became the theory of architectural denotation and connotation via Eco. Primary function is architectural denotation, while secondary function complies with architectural connotation.⁴⁵¹ All these applications are originated dyadic sign theory that I previously described. Eco's theory of code contributed to architectural codes which belong to denotative code or connotative code.⁴⁵² Charles Jencks followed Eco's theory of semiotics by explaining architectural signification system and aesthetic code.⁴⁵³ Beside Saussurean semiology, Broadbent introduced Norm Chomsky's syntactic structure that provides hierarchical deep structure of architectural form and its transformation.⁴⁵⁴ The analogy between verbal language generative grammar and architectural hierarchy of formal configuration created this model.

The notion of meaning in the built environment was presented in the report of '*Meaning and behavior in the built environment.*' Eco's logic of culture is traced by researchers from psychology, anthropology, and architecture. Charles Morris' behaviorist semiotic theory underlined the meaning of built environment. The report contains a broad range of fields illustrating the relation between human behavior and the built environment. The approach was taken within the range of anthropology, psychology, and sociology.⁴⁵⁵ The report attempted to detect the evidence from these interdisciplinary fields through the evidence of human behavior. Human behavior was taken as a substantial factor in the fields. The researches took "theoretical concepts to 'mediational' process," cognitive understanding that "concerned with 'meaning processes'"⁴⁵⁶ by developing categorical articulation through empirical research methodologies. As related to semiotics, Geoffrey Broadbent intended to make a bridge between semiotic programming and psychology

⁴⁵⁰ Umberto Eco, "Function and Sign: The Semiotics of Architecture," in *Sign, Symbols, and Architecture*, ed. Geoffrey Broadbent, Richard Bunt, and Charles Jencks (New York, NY: John Wiley & Sons, 1980), 11-27.

⁴⁵¹ *Ibid.*, 20-24.

⁴⁵² *Ibid.*, 35-41.

⁴⁵³ Charles Jencks, "The Architectural Sign," *ibid.*, 71-118.

⁴⁵⁴ Geoffrey et al. Broadbent, "The Deep Structure of Architecture," *ibid.*, 119-168.

⁴⁵⁵ *Meaning and Behavior in the Built Environment*, ix-xiii.

⁴⁵⁶ *Ibid.*, xii

through human motivational observation. However, he concluded building performance could only be the effective indicator at the time. Thus, the function of semiotic and the performance of semiotic were selected as related to “human physiological response to the environmental conditions.”⁴⁵⁷ Therefore, the functionality of semiotic such as Eco’s theories gained the legitimation as influential sector of semiotic approach to the built environment and architecture in general.

The influence from philosophy of language to theorist of language of postmodern architecture other than originated from Morris and Eco provided the diversified theory of postmodern architecture. However, these varieties can be regressed to the same origin and structure, dyadic language. The limitation is that many of them are for and against Saussurean semiology. Art historicist Donald Preziosi described a possibility of visual communication through language of architecture and built environment by approaching by the application of Roman Jakobson’s linguistic theory.⁴⁵⁸ Based on Jakobson’s six functions of communication theory, Preziosi defined the view of architectural functionality associated with language of architecture: “(1) the *expressive* function dominates in the personal style, the mode of architectonics self-representation of a builder. (2) The *conative* function of architecture addresses its use, suggesting orientations, interpretations, and his spatial behavior. (3) The phatic function is the environmental framing of interpersonal interactions, the aspect of architectural ‘territoriality.’ (4) The *aesthetic* function predominates when architecture is oriented toward its own mode of construction. (5) The *mea-codal* function is realized through historical reference or illusion and ‘quotations.’ ... (6) The *referential* function is defined by Preziosi as being its contextual utility or immediate purpose.”⁴⁵⁹ The underlined assumption is architectural language is an analogy of verbal language and its *codal* system is similar to that of verbal language. Visual communication analysis was

⁴⁵⁷ Geoffrey Broadbent, "A Semiotic Programme for Architectural Psychology," in *Meaning and Behavior in the Built Environment*, ed. Geoffrey Broadbent et al. (New York, NY: John Wiley & Sons, 1980), 350.

⁴⁵⁸ Preziosi, *Architecture, Language, and Meaning: The Origins of the Built World and Its Semiotic Organization*, vol. 49.

⁴⁵⁹ Nöth, *Handbook of Semiotics*, 436.

necessary with “verbocentric captivity.”⁴⁶⁰ He stated: “A semiotics of communicative events in their multimodal totality has yet to be born, and it will not come about until we have a more profound and complete understanding of the nature, organization, and operant behaviors of sign-system other than verbal language.”⁴⁶¹ Then, *architectonic code, units, and forms* for the analysis of *built environment* were focused on. He attempted to find “the conditions for the emergence of ... multimodal cognitive behavior as evidence by the appearance and evolution of built environments.”⁴⁶²

Structural linguistics was questioned by Roland Barthes, its rigid determinable characteristics, although he was originally propagator of Saussure and structuralism with the model constructed by “the system consisting of E. an expression (or signifier), in relation (R) to C, a contents (or signified).”⁴⁶³ The characteristics of his Saussurean origin theory includes (1) principle of linguistics structuralism, closed corpus of analysis subjected synchronic aspects, (2) method of structural linguistics regarding such as distribution and communication, (3) the use of distinctive code system originated from the analogy to Saussurean dichotomy, *langue* and *parole*.⁴⁶⁴ The distinguished code system *langue* and *parole* was influenced Jencks and Baird for their adaptation to architectural language.⁴⁶⁵ Barthes recognized the limitation of structural linguistics.⁴⁶⁶ His changing course, the abandon of research on structuralism was in 1971: “he concluded with his reference to his earlier research: ‘I passed through a (euphoric) dream of scientificity.’”⁴⁶⁷ He described his new direction distinguishing a science of semiology and his own semiology: “language as an oppressive system, literature as a revolt against language, and semiotics as a creative activity.”⁴⁶⁸ Like reading text, at

⁴⁶⁰ Preziosi, *Architecture, Language, and Meaning: The Origins of the Built World and Its Semiotic Organization*, vol. 49, 1.

⁴⁶¹ *Ibid.*

⁴⁶² *Ibid.*, 10.

⁴⁶³ Nöth, *Handbook of Semiotics*, 310.

⁴⁶⁴ *Ibid.*, 312.

⁴⁶⁵ Jencks and Baird, "'La Dimension Amoureuse' in Architecture " 45.

⁴⁶⁶ Paul De Man, "Roland Barthes and the Limits of Structuralism," *Yale French Studies* Reading the Archive: On Texts and Institutions, no. 77 (1990).

⁴⁶⁷ Nöth, *Handbook of Semiotics*, 313.

⁴⁶⁸ *Ibid.*

some level or part of structure of architecture and city need to be interpreted by a reader depend on how it is read based on reader's mind. The universally applicable structure to determine a meaning is unavoidably uncertain interpretation. Barthes' textual metaphor on architecture and city was influential for post-structuralism and postmodern philosopher such as Jacques Derrida and architectural theorist such as Peter Eisenman and Bernard Tschumi. The transition from postmodern historicism to deconstructivist architecture was influenced by Roland Barthes' post-structuralism and his method of mythology reveals connotative signified. The theory of connotation was influenced by Hjeltmslev⁴⁶⁹ who connected also Eco. Eisenman's formalist aspect however associated with Chomsky's syntactical language theory, generative grammar in the 1970s. It was flexible and critical formal system rather determinative formalism. Chomsky's generative grammar has some level of relevancy to Hjeltmslev's concept of connotation.⁴⁷⁰ Tschumi's theoretical exploration disjunction was originated the need of desire to fulfill the gap in order to radically aestheticize this lacking. Derrida's notion of deconstruction which is a reverse seeking of unachievable and radicalized goal of signification through metaphysics of presence and transcendental signified was imported to the field of architecture. This signification process is that of Adorno's negative dialectics that forces our suffering in order to find unachievable truth, lacking. As we can see this language of architecture is no more than dyadic language. Barthes' changing course from structuralism to post-structuralism coined with deconstructivist work.

V.4 Work of Postmodern Architecture

Postmodern architecture has various forms of expression under some level of consensus. Fredric Jameson (born 1934) stated two kind of postmodern architecture: "as the specific reactions against the established form of high modernism," and "the effacement in it of

⁴⁶⁹ Ibid., 72.

⁴⁷⁰ Pierre Pellegrino and Emmanuelle P. Jeanneret, "Meaning of Space and Architecture of Place," *Semiotica*, no. 175 (2009): 269-96.

some boundary or separations.”⁴⁷¹ These two kinds of phenomenon can be understood linked together. Reactive postmodern represented various form of anti-authorities and deformation against normative rules including modernism functionalism and authentic classicism. The production of variety was also sustained by the social structural change of inclusive flexibility. Therefore, postmodern style cannot be pure. Rather it is recognized as the movement, which includes “different forms of postmodernism.”⁴⁷² The different forms however use the same language that represents a ‘cultural logic’ in this case. Postmodern architecture with the association of postmodern language of architecture has been discussed, for example, by Charles Jencks in the series of his writings. His application of postmodern theory of architecture has created the image of postmodern architectures and architects in the certain level. I depict three different forms that share common rules or at least similar language: namely (1) Scenographic postmodern architecture (Michal Graves, Robert Venturi, Arata Isozaki, Robert AM Stern, ...), (2) contextual postmodern architecture (Robert Venturi, Mario Botta, Aldo Rossi, Tadao Ando,...) , and (3) deconstructivist postmodern architecture (Peter Eisenman, Daniel Libeskind, Frank Gehry,). From a stylistic point of view, these various forms of expression is apparently different, but their theories possibly innate the same kind of limitation and fragmentation. If we allow this fragmentation is a part of the characteristics of postmodernism itself, then it will be one of the typical evidences of innate limitation and pessimistic view self-reflectively. This is also the form of *simulacrum without reference* that Baudrillard explained us.⁴⁷³ Without waiting the words of Nietzsche’s essence of *tragedy*, nihilistic aspects of postmodernism forms become a foreground view while an optimistic background view will resist against the total destruction. This two-sided structure is common to all three forms stated above. In the following I will describe three different forms of postmodern architecture. I categorized the three different kinds of postmodern architecture: Scenographic postmodern architecture, Contextual postmodern architecture, and Deconstructivist

⁴⁷¹ Fredric Jameson, "Postmodernism and Consumer Society," in *The Anti-Aesthetic: Essays on Postmodern Culture*, ed. Hal Foster (New York, NY: The New York Press, 1998), 128.

⁴⁷² Ibid.

⁴⁷³ Baudrillard, *Simulacra and Simulation*, 6.

postmodern architecture. I summarize their characteristic and the reason of this categorization.

Scenographic postmodern includes postmodern historicism, figurative architecture, free style postmodern, and some of vernacularism architecture which seeks nostalgic architectural language. Architects who belong to this category approach the use of classical form and its modification. For example, Michael Graves, Robert AM Stern, and Arata Isozaki are prominent. Graves's Figurative architecture was from Graves' intention to create his own language and vocabulary. His Classical form was once called as 'free style classicism' by Jencks. Michael Graves (born 1934) was a member of New York Five and his Corbusier's cubist was transformed depicting classical figuration and formal system. He adapted formal interpretation of classicism to his language of architecture. He uses figurative elements with exaggeration of scale emphasizing size and simplification. He changed his course this direction from neo-Corbusier style such as James Starling around 1970s by emphasizing key stone component during Fargo-Moorhead Cultural Bridge. By 1980 his style was well known by Portland Public Service Building. Massive non-characteristics of this office building was transformed by him to a full of imaginary. Robert AM Stern (born 1939) was associated with vernacularism and historicisms. His work is categorized postmodern with Michael Graves and Arata Isozaki according to Jencks Postmodern Evolution chart.⁴⁷⁴ Stern "developed the ornamental ideas"⁴⁷⁵ out of classical form. For example, Cohn Pool House (New Jersey, 1981-82) is described by Jencks: "Robert Stern summarized many of these tendencies [of *ornamentalism*] in his design for a Pool House – a sybaritic commission that pushed the edges of brazen expression. It is full of colors that enhance the delight of basing."⁴⁷⁶ He was accounted as one of mannerist postmodern architects. Arata Isozaki uses eclectic, ornamental, and mannerist method. He was originally educated under modernist environment such as under Kenzo Tange. However his

⁴⁷⁴ Jencks, *New Paradigm in Architecture: The Language of Post-Modernism*, 51.

⁴⁷⁵ *Ibid.*, 55.

⁴⁷⁶ *Ibid.*, 127.

mannerist work is sustained by tectonic aspect of work of art. For example, Tsukuba Civic Center (1980-85, Japan) shows mannerist work imported from various Western sources such as Michelangelo, Ledoux, and Moor ironically reinterpreting to the context of the location. Jenks explained Isozaki's mannerist: "Arata Isozaki, ever the eclectic, combined the Venturian flat ornament in metal with a more sculptural approach, and appropriately mixed these modes for a public building."⁴⁷⁷ Behind scenographic architecture the meaning of architecture is aestheticized by the essential function of *metaphor*⁴⁷⁸ and its elements as metonym must be constructed together with *mind and body*⁴⁷⁹ in order to understand architecture. The notion of simulacrum would provide an illusion that transforms fundamental base of architecture that was stableness of space and time. Instead of this stableness for scenographic postmodern, we might have locality of time and space like Paul Ricoeur's *narrative time, memory and imagination*.⁴⁸⁰

Contextualism postmodern has two different directions in appearance, but they are connected at least partially because of the inclusive characteristics of postmodern architecture. One side is authentic architecture, which follows rationalism or critical theory. Neo-rationalism Aldo Rossi, for example shows this attributes in Europe. With the relations to a local context, vernacularism is a basic condition of this category. In Japan Tadao Ando's work represent the combination between vernacular and tectonic on the basis of aesthetic labyrinth and formal manipulation. Theorist and architect Kenneth Frampton's notion of Critical Regionalism is a background of Ando's intention. Frampton's receiving influence from Heidegger's ontological phenomenology restrains the value of local identity so that architecture still holds authenticity on the one side, on the other critical theory enforces self-reflective process that makes new level of oscillation.

⁴⁷⁷ Ibid., 131.

⁴⁷⁸ Mark Johnson, *The Meaning of the Body: Aesthetic of Human Understanding* (Chicago, IL: University of Chicago Press, 2008).

⁴⁷⁹ *The Body in the Mind: The Bodily Basis of Meaning, Imagination, and Reason* (Chicago, IL: University of Chicago Press, 1999).

⁴⁸⁰ Ricoeur, *Memory, History, and Forgetting*.

The second type of contextualism postmodern is negation of authentic form of architecture, still holds inclusiveness to vernacular. Robert Venturi theorized this contextualism. His notion of complexity and contradiction is prevailed by this sub-category of contextualism postmodern architecture. When the formal complexity of this category projected on the form of Saussurean postmodern architecture, there is the possibility to shift architecture to a deconstructivist postmodern architecture. While Venturi follows external context (urban vernacular) and internal context (learning complexity in history of architecture), Belgian architect Lucien Kroll is tacticizing complexity with tectonic and his philosophical basis. Kroll's twofold strategy, "militant modernist"⁴⁸¹ and postmodernist mind in openness of feeling allow him to pursue "a new kind of decentralization and a rebirth of the pluralistic image."⁴⁸² Militant way is the source of power as a builder's mind production, while postmodern mind is the complexity in form and his use of materiality with incompleteness feeling. His strategy coins Frampton's critical regionalism in a different approach. The effect of this complexity perhaps is similar to deconstructivist. His complexity is creating context of complexity in the built environments.

Deconstructivist postmodern architecture is equivalent to that of scenographic but it is similar holding negativity. The notion of deconstruction recalls proxy existence which came from Theodore Adorno's *Negative Dialectics*⁴⁸³ and *Aesthetic Theory*.⁴⁸⁴ Derrida's notion of deconstruction follows this idea. His version of logocentrism requires negative relation of signifier and signified (metaphysics of presence and transcendental signified).⁴⁸⁵ Architectural labyrinth of deconstructivist follows this philosophical and psychological rule. The rule appears to be continued to produce unavoidable feeling of negative interaction. This feeling of desire can be equivalent to the feeling of fulfillment, which is already given as scenographic postmodern

⁴⁸¹ Lucien Kroll, *An Architecture of Complexity*, trans. Peter Jones Blundell (Cambridge, MA: MIT Press, 1987), 11.

⁴⁸² *Ibid.*, 2-3.

⁴⁸³ Adorno, *Negative Dialectics*.

⁴⁸⁴ *Aesthetic Theory*.

⁴⁸⁵ Derrida, *Of Grammatology*.

architecture. Therefore, I call deconstructivist postmodern architecture as “negative scenographic postmodern architecture.” Essentially, they have the same structure (dyadic) but it is reversed.

V.5 Saussurean Postmodern Architecture

Tentatively I can define the Saussurean postmodern architecture, which has more or less legacy of dyadic language form of architecture. They are originated from philosophy of structuralism influenced by linguistics theory, semiology of Saussure. And this definition should be applicable for the interpretation of postmodern architecture as I discussed above in this chapter. For the final validation we must wait the result of analysis on a triadic language of architecture interpretation through Charles Sanders Peirce. Although sign theorists (Charles W Morris, and Umberto Eco) and architectural theorists of postmodern architecture (Charles Jencks, Broadbent and others) intended to compare Peirce with Saussure, their trial was still staying in the same mode. The theory of deconstruction was also intended to upside down the signification process with negative dialects, the notions of deconstruction presupposed dyadic system. Therefore, one way another the language of postmodern architecture is broadly categorized with small fractions of difference of form. Since this difference is also characteristic of postmodern architecture, which is main character of inclusive architecture, and the variety of forms, the only the way to breakthrough can be done by changing a paradigm. The need of this change was already imbedded when language of postmodernism adapted Saussure and misguided Peirce. The theoretical underpinning of Saussurean postmodern architecture is understood as the result of application of dyadic sign theory. The reason for this result is also because we interpret postmodern architecture with a set theory for postmodern architecture. This sequence provide us with self-referential process not changing paradigm of understanding a legitimacy of type of language for architecture in general, if postmodern architecture has universal idea of architecture. Purposefully I will use classical form of architecture to analyze postmodern architecture through Peircean mode of language of architecture in the following chapters (Chapter

VII and Chapter VIII). The result of this interpretation will be Peircean postmodern architecture as oppose to Saussurean postmodern architecture. Both are interpreting same architecture, postmodern architecture but with different modes. The mode of Saussurean Postmodern architecture is dyadic opposition and reference with positive for scenographic postmodern architecture, and negative for deconstructivist postmodern architecture. They are in the same mode differently. Therefore, uncovering a truer language of architecture is legitimated. This goes beyond the dyadic language that is common to current architectural theory of language.

CHAPTER VI

PEIRCEAN SEMEIOTIC AND SEMANTIC LOGIC

VI.1 Introduction

Charles Sanders Peirce (1839-1914) was recognized as the founder of American Pragmatism that contributed many disciplines of science. Charles Sanders Peirce, William James, and John Dewey and other philosophers who belonged to the *metaphysical club* developed pragmatism philosophy after original Peirce's idea, *pragmatic maxim* in the classic pragmatism. As the founder, Peirce theorized modern sign theory called 'semeiotic' along with his pragmatism philosophy. His foundation of sign, semeiotic "aims at epistemological and even metaphysical universality." Peirce held the universal view that "every thought is a sign, taken in conjunction with the fact that that life is a train of thought, proves that man is a sign."⁴⁸⁶ His philosophy was made on the universal foundation that consists of three categories of mode of being, namely *firstness*, *secondness*, and *thirdness*. This triadicity constitutes his universal view of relativity. Also, his philosophy did not accept nominalism and foundationalism. This numerical naming of three categories is one of his intentions to be universal and to express his anti-nominalism principle. Kantian three modalities including mode of possibility, actuality, and necessity are inherited within Peirce's these three mode of being.

Peircean sign theory, semeiotic was developed based on his universal view of relativity and three categories of relations. This essential characteristic is clearly distinguishable in his sign theory different from those of dyadic sign theory that is represented by Ferdinand de Saussure. The initial concept of this dissertation was developed from this basic fact that is surprisingly treated less important in the arena of theory of architecture. The language theory of architecture like other art and culture fields followed dyadic language originated from Saussure during the 1970s and 1980s, roughly in the period of postmodern architecture. The idea of basic three types of sign, *icon-index-symbol*

⁴⁸⁶ Nöth, *Handbook of Semiotics*, 39-41.

dominated architectural theorists in order to capture Peircean theory for the use of architectural practice while philosophy of language maintained behaviorist dyadic system. Thus, Peirce was over simplified and appears have lost opportunity to understand the depth of his philosophy for the theorist of postmodern architecture. I am intending to restore this lost opportunity with an updated interpretation of Peircean semeiotic and pragmatism.

The relation creates meaning of architecture and architectural form is a source meaning. Eco, Morris, and others including Peirce himself calls this source entity as sign vehicle. More specifically, relation itself becomes entities in the realm of logic that support the understanding of original Peirce's thought in depth. Peircean semeiotic is essentially logic of relations. In the right of Peirce's scholar's updated theoretical approach, the reading process to the essence of 'relations' in Peircean semeiotic becomes approachable for the theory of architecture. Peircean Algebraic Logic (PAL) described by Robert W. Burch entitled '*A Peircean Reduction Thesis*'⁴⁸⁷ opened the way to the understanding of logic of Peircean semeiotic. In this chapter therefore, Peircean sign theory (semeiotic) and his logic (Peircean Algebraic Logic) must be explained as the key components for the review of Peircean theory.

VI.2 Peircean Triadic Universal View

The essential philosophical view of Charles Sanders Peirce is based on triadic system with relativity. The careful understanding of the category of mode should be prioritized and it proved clear cutting from that of other than Peircean view. This view is a metaphysical reality that constructs and penetrates the entire realm of Peircean thoughts. My intension of this research is to interpret postmodern architecture through Peirce need to be drawn from this point of view. Peirce provided the following definition for three categories of mode of being:

⁴⁸⁷ Burch, *Peirce's Reduction Thesis: The Foundation of Topological Logic*.

- “*Firstness is the mode of being of that which is such as it is, positively and without reference to anything else.*”
- *Secondness is the mode of being of that which is such as it is, with respect to a second but regardless of any third.*
- *Thirdness is the mode of being of that which is such as it is, in bringing a second and third into relation to each other.*

I call these three ideas the cenopythagorean⁴⁸⁸ categories.” (CP 8.328)

Firstness mode of being “comprises the quality of phenomena, it has no reference monadic mode such as “idea of ... quality of feeling.” In quality in itself there can be no comparison and no value associated. This mode possesses ephemeral and non-perceivable characteristics, and the mode of sense-quality.⁴⁸⁹ For Peirce the essence of quality must be independent, thus “quality is dependent upon sense is the great error of the conceptualist,” and “a quality is a mere abstract potentiality.”⁴⁹⁰ In this mode “the idea of the present instant, which, whether it exists or not, is naturally thought as a point of time in which no thought can take place or any detail be separated, is an idea of Firstness.”⁴⁹¹ The main characteristic of this category can be summarized as monadic and potentiality mode that has no duration but exist for possibility.

Secondness mode of being is a “category of elements of phenomena, comprises the actual facts.”⁴⁹² “It is a category of comparison, facticity, action, reality, and experience of mind and time.”⁴⁹³ Actuality is not the mode for fact in past time; it is rather “it happens here and now.” He explained, “A permanent fact is less purely individual; yet so far as it is actual.” This facticity and actuality “resist our will,” and it is “brutal.”

⁴⁸⁸ Peirce, *Collected Papers of Charles Sanders Peirce*. (CP 8.329) Term cenopythagorean Peirce described “The cenopythagorean categories are doubtless another attempt to characterize what Hegel sought to characterize as his three stages of thought.”

⁴⁸⁹ *Ibid.*, (CP 1.418)

⁴⁹⁰ *Ibid.*, (CP 1.422)

⁴⁹¹ *Ibid.*, (CP 8.329)

⁴⁹² *Ibid.*, (CP 1.419)

⁴⁹³ Nöth, *Handbook of Semiotics*, 41.

Therefore, “an idea of Secondness is the experience of effort.”⁴⁹⁴ This turns to the idea of “consciousness of the action of a new feeling in destroying the old feeling.”⁴⁹⁵ Peirce called this shift as ‘experience.’ Also, this shift comes with the mind of resistance that is ‘brute action,’ and “the idea of any law or reason.”⁴⁹⁶ This law is human made law as opposed to natural law that is thirdness mode. Summarizing secondness mode, it is factual and an actual mode which involves resistant of our mind. The experience triggers shift to a new experience, which might be a brutal and harsh feeling in process. This mode is important because it relates to the process of shifting by taking feeling and possibility mode of being which belongs to firstness. “Secondness involves the relation of a first to a second.”⁴⁹⁷

Thirdness will bring firstness and secondness. “The third category of elements of phenomena consists of what we call laws when we contemplate them from the outside only, but which we see both sides of the shield we call thoughts.”⁴⁹⁸ The thirdness involves our mind, which is described as ‘thought’ and ‘laws.’ Peirce differentiated laws from fact, then he explained as the “collection of facts [that] can constitute law” which “shall be characterized” not as facts but with the “potential world of quality.” Since quality belongs to the firstness mode, there is another shift. This shift is not brutal and resistive rather “a peculiar kind of subject, the thought, or as the phrase in this connection is, the mind, as a peculiar kind of subject foreign to mere individual action.”⁴⁹⁹ Therefore, summarizing the mode of thirdness is the thought that brings to the natural law, which has potentiality to bring firstness and secondness. Thirdness mode is then conceived as mental elements of our action beyond mere individual level of thoughts.

⁴⁹⁴ Peirce, *Collected Papers of Charles Sanders Peirce*. (CP 8.330)

⁴⁹⁵ Ibid.

⁴⁹⁶ Ibid.

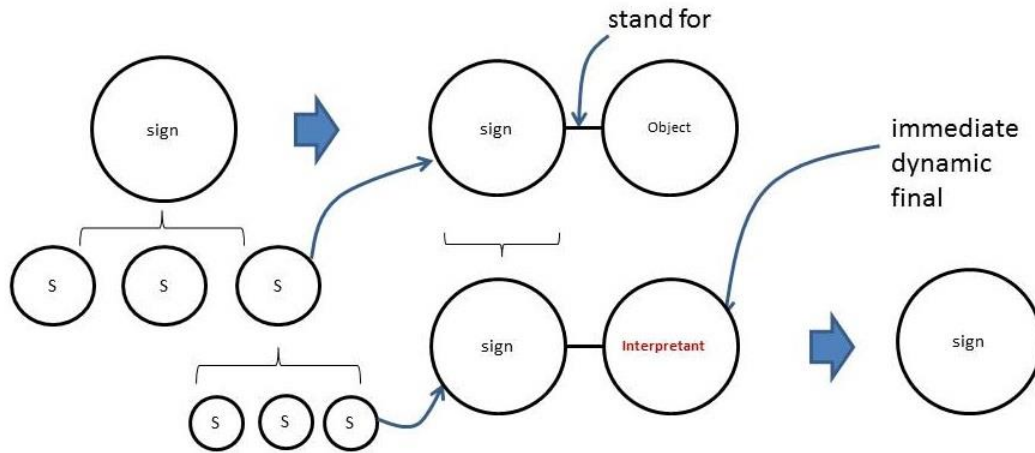
⁴⁹⁷ Nöth, *Handbook of Semiotics*, 41.

⁴⁹⁸ Peirce, *Collected Papers of Charles Sanders Peirce*. (CP 1.420)

⁴⁹⁹ Ibid.

These three distinctive modes of being, *firstness*, *secondness*, and *thirdness* penetrate Peirce’s triadic relations that include the *representamen*, relation to object, and relation to *interpretant* if we follow Peirce’s Ten Classes of Signs formula. As Peirce further described interpretant itself is categorized as immediate interpretant (firstness mode), dynamic interpretant (secondness mode), and final interpretant (thirdness).⁵⁰⁰ (See, **Figure 1.**) These three modes of interpretant will formulate the shifting mode of Peircean semeiotic between firstness, secondness, and thirdness. Immediate interpretant is “the schema,” dynamic interpretant is “the actual effect,” and final interpretant is “the sum of the Lessons.”⁵⁰¹ The final lesson can be imbedded as a new schema for the next step. Therefore, all three need to work together. The categories, firstness, secondness, and thirdness is the universal category that Peirce hold in his entire semeiotic theory and I must back this idea always in order to find a truth in a language of architecture.

Figure 1: Relationship of Sign, Object, and Interpretant



⁵⁰⁰ Ibid., (CP 8.314-315)

⁵⁰¹ Ibid., (CP 8.314)

VI.3 Dyadic and Triadic Sign Theory

The essential difference between Peircean semeiotic and Saussurean semiology is the difference of structure in terms of relationship among the entities, which makes sign. This difference shows entire universal view's difference of language theory between Peirce and Saussure. This implies the gap between pragmatism and post-structuralism (Saussurean interpretation of postmodernism). My aim is to provide new interpretation of postmodern architecture through Peirce be recognized as the necessary process in order to understand postmodern architecture correctly. This research follows solely (1) Peircean triadic sign theory, and (2) Peircean semantic logic.

The comparison between dyadic and triadic sign system is summarized by Winfried Nöth in his *Handbook of Semiotics*.⁵⁰² Although, Peircean semeiotic considered as triadic, in the discussion of philosophy of language the impediment described, “there is a zone of vagueness whenever a third correlate is mentioned but not systematically incorporated in to semiotic theory.”⁵⁰³ Dyadic and triadic sign system—long time discussion in philosophy of language—can be seen in history from Greek to present in various forms with “something stands for something else,” and “something serves in place of something else.” This ‘stand for’ formula is for both dyadic and triadic.⁵⁰⁴ While Saussurean semiology is considered the typical dyadic because signifier is *a priori* as language without having third correlated of sign beside signifier and signified,⁵⁰⁵ Peircean theory is triadic because of mental activity involvement as ‘*Thirdness*.’⁵⁰⁶ As oppose to Saussurean dyadic—signifier-signified relationship—Peircean system takes triadic category which includes three mode of being—*firstness*, *secondness*, and *thirdness*. Within these modes, Peirce established his universal views that consist of three entities’ relationship, which includes *sign*, *object*, and *interpretant*.

⁵⁰² Nöth, *Handbook of Semiotics*.

⁵⁰³ *Ibid.*, 87.

⁵⁰⁴ *Ibid.*, 84.

⁵⁰⁵ *Ibid.*, 87. Saussure rejected the term ‘chose’ as a third correlated sign. A signifier is always readily available as Language.

⁵⁰⁶ Peirce, *Collected Papers of Charles Sanders Peirce*. (CP 1.420).

⁵⁰⁷ Peirce saw everything as sign including human beings. The term *object* means a ‘*semiotic object*’⁵⁰⁸ which holds the relationship between sign and object but not an absolute ‘*real object*.’ *Interpretant* is a *representamen* which is another sign including a human who interpret the interpretant in a sense but not exactly an interpreter of sign. Interpretant can be understood as ‘mediator’⁵⁰⁹ or ‘cultural unit’⁵¹⁰ that can create a new stage of meaning. Peircean semeiotic sees the worldview with three categories, which formulate three modes of being—monadic, dyadic, and triadic relationship. Peircean semeiotic sees this three-mode-sign as dynamic relation through the notion of *interpretant*. Interpretant itself is a sign, but it was misinterpreted as an interpreter that interprets signs on many occasions even including Charles W. Morris. Eco and his followers – theorists of postmodern architecture defined Peirce as equivalent to Saussure by limiting Peirce’s sign within the dyadic mode.

This research followed Peirce’s original writing in *Collected Papers* (1931)⁵¹¹ which plausibly can explain this misinterpretation of Peirce. Peircean sign has a triadic structure that can be a *hierarchy* or *heterarchy*⁵¹² as oppose to Eco’s code of sign, which remains as dyadic hierarchy of ‘expression’ and ‘content.’ Eco provided his theory with sign function system which has a twofold entity—signifier and signified, sign-vehicle

⁵⁰⁷ Charles Sanders Peirce’s sign theory called semeiotic is along with his version of phenomenology categorized three entities. His notion of ‘Firstness, Secondness, and Thirdness’ are categorized in the mode of being as monadic (single), dyadic (two things relation), and triadic (more than three things relations such as pattern). Triadic includes all these three modes. See *ibid*.

⁵⁰⁸ Floyd Merrell, *Peirce, Sign, and Meaning* (Toronto, Canada: University of Toronto Press, 1997), 11-12.

⁵⁰⁹ *Ibid*.

⁵¹⁰ Eco, *A Theory of Semiotics*, 68. Eco described meaning is a cultural unit. “Linguistic expression ... defines the cultural units” which carries proceeding expression. This clarification is circumscribed by the cultural units that “represent the chain of ... the *interpretants*.”

⁵¹¹ Peirce, *Collected Papers of Charles Sanders Peirce*.

⁵¹² The notion of ‘heterarchy’ was introduced by Warren S. McCulloch. This notion contains (1) logical contradiction, and (2) non-transitive process. See Eberhard von Goldammer, Joachim Paul, and Joe Newbury, "Heterarchy - Hierarchy: Two Complementary Categories of Description," *Vordenker* August(2003). The possible relation to Peircean triadic sign theory was explained via McCulloch by David Stark. The network development was made “at the intersection of neurology, computer science, mathematics, and linguistics.” He suggested that “hierarchy is not the only form of organization,” rather heterarchy is the key of the notion of “organization” along with metaphor. See David Stark, *Search Questions: Inquiry, Uncertainty, Innovation*, vol. December, Working Papers Series (New York, NY: Center on Organizational Innovation, Columbia University, 2008), note 60 in 35.

and meaning, and primary function and secondary function according to his '*Theory of Semiotics*.'⁵¹³ The degree of triad-ness among Peirce, Eco / Morris, and Saussure must be strictly conserved for the aim to establish the interpretation of postmodern architecture. The theorist of postmodern language and architecture did not demarcate this point. In the previous chapter I explained Morris and Eco's sign theory including this consideration and the limitation of behaviorist semiotic scheme in order to understand Peircean triadic universal view. To understand the difference dyadic and triadic sign theory is inevitable for the accuracy how we should observe language for architecture. Therefore, I recall the essential meaning of Peircean sign theory, what Peirce intended and formalized.

VI.4 Peircean Sign Theory

Peircean sign theory called *semeiotic* was established based on his universal triadic worldview, monadic-dyadic-triadic mode of being. Entities of each mode takes relation of sign only, sign to object, and sign to interpretant. Not only sign objects Peirce sees all signs are thoughts in the frame of relativity. Therefore, all of sign, object, and interpretant are understood essentially as a sign with relative way. This relativity is the source of semiosis involving chain of *interpretants*, ongoing sign process, while it is the process of determining a final meaning through final interpretant. If Peirce's notion of '*pragmatic maxim*' is to define the possibly capable resolution and meaning after the effect of chain of interpretant, the effects of series of mediations, the process of determination can receive an aide and a logic to implement this process. Unlike dyadic signification sign system, Peircean triadic sign system takes different root and sequence. This sequence allows providing an alternative language theory of cultural understanding including architecture. According to Floyd Merrell *semiosis is living process* that takes *no beginning and endless*.⁵¹⁴ As living organism we may perceive architecture this way, while works of architecture need to be determined as the result of *pragmatic maxim*.

⁵¹³ Eco, *A Theory of Semiotics*.

⁵¹⁴ Floyd Merrell, *Signs Grow: Semiosis and Life Process* (Toronto, Canada: University of Toronto Press, 1996).

This situation returns to the oscillation between rationalism and romanticism, which I have been discussing throughout this research. Peircean sign theory focuses on both aspects rigorously and methodologically.

For the division of sign Peirce discussed essential logic regarding his sign theory. The relation between logic was explained by him: “logic, in its general sense, is ... only another name for *semiotic* ..., the ‘quasi-necessary,’ or formal doctrine of signs.” *semiotic* are “only another name.”⁵¹⁵ Thoughts, logic, and sign are all quasi-necessary foundation for the constitution of his universal view of reality. The idea of Peirce’s *representamen*, which “stands to somebody for something,” is equivalent to a sign.⁵¹⁶ This *representamen* as sign “address somebody ... created in the mind of that person an equivalent sign.”⁵¹⁷ Peirce called this equivalent sign as *interpretant*. Therefore, “the sign stand for something” that is “its object,” that is *sign object*. Sign “stands for that object, not in all respects, but in reference to a sort of idea.”⁵¹⁸ Peirce called this idea as *ground* that “one man catches another man’s idea.”⁵¹⁹ Thus, *sign* connects with *object*, *interpretant*, *representamen*, and *thoughts (ground)* that embody a possible meaning. Peirce described all these entities (sign, object, interpretant, representamen, and thoughts) characteristics in terms of classes that comply with his notion of triadic sign structure: first is *pure grammar* that “embody[s] any *meaning*,” second is logic proper, “quasi-necessary true” of intelligence of object, and third is *pure rhetoric* that “ascertain the laws.”⁵²⁰ Peirce made these categorizations in the logic of mathematics: “the first comprises the qualities of phenomena,” “the second category of elements of phenomena comprises the actual facts,” “the third category of elements of phenomena consists of what we call laws.”⁵²¹

⁵¹⁵ Peirce, *Collected Papers of Charles Sanders Peirce*. (CP 2.227)

⁵¹⁶ *Ibid.*, (CP 2.228)

⁵¹⁷ *Ibid.*

⁵¹⁸ *Ibid.*

⁵¹⁹ *Ibid.*

⁵²⁰ *Ibid.*, (CP 2.229)

⁵²¹ *Ibid.*, (CP 1.418-420)

Peircean sign has relativity and three classifications in order to be self-relative. Relative triadic relation can explain how first, second, and third relation makes relations. The first categorization comprises quality. Peirce further divides this quality to three sub-categories. Peirce described: “The general law of quality, as distinct from the classificatory system of quality ... has three clauses, relating respectively to single qualities, to pair qualities, and to triads of qualities.”⁵²² This subdivision creates hierarchy of the first. Quality is single mode and can be different modes because of this self-relative structure. Peirce’s triadic relation is thus provided at any point as the monadic (single mode), dyadic (two entities relations), and triadic (more than three entities relations, relation of relations). Peircean notion representamen is another sign creates cyclical relativity. Peirce described, “A Representamen is the First Correlate of a triadic relation, the Second Correlate being termed its Object, and the possible Third Correlate being termed its Interpretant, by which triadic relation the possible Interpretant is determined to be the First Correlate of the same triadic relation to the same Object, and for some possible Interpretant. A sign is a representamen of which some interpretant is cognition of a mind. Signs are the only representamens that have been much studied.”⁵²³ From this logic, it is necessary that interpretant as a sign takes three different categories as well including: *immediate interpretant*, *dynamic interpretant*, and *final interpretant*. The notion of interpretant is the key to understand Peircean semeiotic and logic because it provides the form of thoughts. The thoughts are possibly constructed with the specific rules (logic) and simultaneously shifting categories from first to second, second to third, and third to first by changing modes. Through this treatise regarding the shifting categories, I approach Peircean way of reduction logic and its semantic logic and methodology that will be described in the next section. This logic will be also providing the aides to explain the needs and effectiveness of triadic mode language theory for the candidacy of architectural language including postmodern architecture.

⁵²² Ibid., (CP 1.484)

⁵²³ Ibid., (CP 2.242)

VI.5 Peircean Semantic Logic*

Peirce was a logician who contributed to mathematics and scientific fields. Peirce's triadic universal view can be traced by his logic, then, the application of this logic onto the interpretation of postmodern architecture reflectively can prove the capability of the logic. That extends to the foundation of the Peircean semeiotic theory that is appropriate for the interpretation of postmodern architecture. I approach the Peircean semantic logic and the conception of sign that formulates the logical process in the transformation of sign by analyzing Peircean Algebraic Logic (PAL) following Robert W. Burch's *Peirce's Reduction Thesis: The Foundation of Topological Logic*.⁵²⁴ This analysis focuses on a logical model called 'hypostatic abstraction' that involved the process of the clarification of meaning in the theoretical model.

How relations should be constructed was discussed among logic and philosophy disciplines. The key point of the argument is whether relations are constructed essentially by triadic or only dyadic relations. Peirce's *Reduction Thesis* holds "all relations of arbitrary *adicity* may be constructed from triadic relations alone."⁵²⁵ While positivist Willard Van Orman Quine proved "all relations could be constructed exclusively from dyadic ones."⁵²⁶ However, both Peirce and Quine were confirmed correct through the proof of PAL by Robert Burch. Peirce's constructive resources are from the particular triadic relations called "*the teridentity relation*," which allows the proceeding of '*hypostatic abstraction*' involving non-reducible *triadic* terms.⁵²⁷ My goal is to apply this '*hypostatic abstraction theory*' to architectural language at the conceptual level in the model making of Peircean interpretation of formal system of architecture in the Chapter VIII (*Case Study Analysis of Peircean Interpretation*). At the foundation of this theory, the relation is the analogy of *valency formula* and *ion* concept.

* With permission the part of this section includes quotations from passages of *A Peircean Reduction Thesis: The Foundation of Topological Logic*, by Robert W. Burch, 1991, Texas Tech University Press, Lubbock, Texas. Copyright 1991 by Texas Tech University Press.

⁵²⁴ Burch, *Peirce's Reduction Thesis: The Foundation of Topological Logic*.

⁵²⁵ "Charles Sanders Peirce." Accessed January 24, 2012, <http://plato.stanford.edu/entries/peirce/>.

⁵²⁶ Ibid.

⁵²⁷ Ibid.

The relation is held by *adicity*⁵²⁸ and formed as *terms' array*. This basic form of relation corresponds to Peircean “stand for.” It causes *depiction*, *representation*, and *expression*, depends on the semantics level in PAL. PAL is understood to possess the *primitive terms*, their *elements*, and the categorized *elements* as *operations*, which construct terms' hierarchy and recursive structure of PAL with the elements' *properties*. Hypostatic abstraction includes the Peircean way of reduction method that must involve thirdness according to Burch.⁵²⁹ Peircean semantics take three distinctive levels in terms of interpretation that deals with *intensional* semantics of PAL. He categorized semantics as two-fold including *extensional* semantics as *enterpretation* and *intensional* as *interpretation*. Burch explained that the three levels of semantics are (1) *depiction*, (2) *expression*, and (3) *representation*.⁵³⁰ I will utilize these three for the application of interpreting works of architecture in the Peircean way. In the following paragraphs I will review *Peircean Reduction Thesis*, and described the relationship to Peircean semeiotic.

VI.5.1 Summary of Reduction in Peircean Sense (Preface)

In the preface, Burch describes his basic idea regarding *reduction*. His starting point is that “all relations can be reduced to dyadic one.” Importantly he emphasized that “understanding of ‘reduction’ might be different from any sense of ‘reduction’ in which wholesale reduction of all relations to the dyadic possible.”⁵³¹ How to understand Peircean reduction is the prioritized and is the goal for his project. In comparing with the concept regarding shifting mode of Peircean logic, I presupposed that shifting can be possible between monadic and triadic, because monadic can be the next stage of triadic relations if we categorize entities triadic. If I take shifting as an analogy of reduction, the reduction based on dyadic, it appears not a perfect image in a sense in Peircean mode. However, this is the whole point to understand this thesis essentially what the meaning

⁵²⁸ Burch described the relation as “relational valence, that is, the characteristics of a relational network that depend on the valence or ‘adicity’ ... of the relations it comprises.” See “Valental Aspect of Peircean Algebraic Logic,” *Computers & Mathematics with Applications* vol. 23, no. 6-9 (1992): 665.

⁵²⁹ *Peirce's Reduction Thesis: The Foundation of Topological Logic*, 117-22.

⁵³⁰ *Ibid.*, 48.

⁵³¹ *Ibid.*, vii.

of reduction is. For the method to implement this reduction Burch explains to use sets of *n-tuples* as relations with extensionalist understanding. “By extending both the algebraic ideas [, *bonding algebra*] of Herzberger and the graph-theoretical idea of Ketner, this work proposed to develop an algebraic formalism in thesis Peirce had.”⁵³² And Burch’s aim of this thesis is to “propose to show that the reduction thesis it proves is consistent with the result of Lowenheim and the result of Quine.”⁵³³ He uses formalism that represents and “duplicates Peirce’s own actual formalism.”⁵³⁴

Burch explains the idea of *intension* with *simpliciter* and “*interpretation function*” as logical formalism.⁵³⁵ He described that “for the notion of relation as such, as the formalism of this work attempts to show, can be explicated consistent with the extensionalism of standard, nominalistic logic.”⁵³⁶ Burch explains Peirce as a possible intensionalist. And later work for the interpretation function he used this point. Interestingly he understands Peirce as “Metaphysical foundationalist with regard to relations”. He brought from Peirce’s view that “relations as such were fundamental, whereas individual entities were derivative by means of (hypostatic) abstraction of them.”⁵³⁷ He sees these entities as sets, *n-tuples* in his logic and sets as also “whole apparatus”, “which relegate to logical semantics which were not primary for Peirce rather derivative.”⁵³⁸ Later I interpreted this point in the hierarchical and recursive structure of his logic.

VI.5.2 Peirce’s Logical Project (Section 1)

Methodological reasoning was provided by Burch comparing algebraic logic and quantificational logic. He explained the importance of reason: “in algebraic logic, what Peirce considered the most fundamental of all modes of conceptual combination, namely

⁵³² Ibid.

⁵³³ Ibid.

⁵³⁴ Ibid., viii.

⁵³⁵ Ibid., ix.

⁵³⁶ Ibid.

⁵³⁷ Ibid.

⁵³⁸ Ibid.

‘application’ ... is handy represented,⁵³⁹ “the terms of algebraic logic may naturally be understood to stand for relations, relations as such: and, given Peirce’s realism and foundationalism with regard to relations, it follows his thinking that reasoning is primary, most elementarily, reasoning *about relations*.”⁵⁴⁰

Burch stated the connection between Icon and Topology as ideal. He explains that Icon is as “ideal ... system of logical signs that should display the elements of reasoning by actually ... resembling them, by being ‘icons’ of them” and Peirce’s “logical graphs,” the “entitative graphs” and the “existential graphs” are more iconic and practical to use. Burch explores the use of his logical graph system that is actually helpful to have an immediate understanding of the PAL system compared to the cumbersome mathematical explanation and proof. Although, the reciprocal process between mathematical process and graph system might be fundamentally required. The graphs “were meant as topological syntax for logic.”⁵⁴¹

Burch discusses the basic idea of “application,” “bond” or “Joint” by using the “valency formula” and the concept of “ion” as “pairwise.” This formula is major concept in Peirce’s “Unitary Logical Vision” (ULV). He called ULV as “Peirce’s various logical systems” which are “different attempts to formulate, with clarity and iconicity a vision of logic ... which remained constant despite the changes in its formulation” of Peirce.⁵⁴²

The formula of multiple bonding is:

$$V = V_1 + V_2 + \dots + V_n - 2k$$

Where: V_n is the *valental* numbers.

k is the number of multiple bonding.

By taking this concept Burch developed PAL which “is an attempt to amalgamate various systems of logic that Peirce developed over his career” and “specifically

⁵³⁹ Ibid., 1-2.

⁵⁴⁰ Ibid., 2.

⁵⁴¹ Ibid., 2.

⁵⁴² Ibid., 3-4.

designed to accord closely with the existential graphs.”⁵⁴³ Also, “PAL allows for the proof in it of theorems, and designed to “correspond with Bernays’ algebraic logic.”⁵⁴⁴ Moreover, he described that PAL “provides single ‘generic’ formalism with which the various Peircean systems can be handily compared.”⁵⁴⁵ I understood the concept of bonding with valency Formula to use the notion of “sign stand for” in Peircean mode.

VI.5.3 Fundamental Notions of PAL (Section 2)

Burch noted useful for helping to understand PAL: such as graphical system which allows us to have rapid understanding of construction of PAL by simulate the picture, “Cartesian Product that is introduced technically as part of the semantics of PAL.”⁵⁴⁶ Regarding Cartesian Product he stated that while “philosopher often insist on a rigid distinction between ‘Cartesian Product’ which they conceive to be always a set of ordered pairs, and ‘Concatenation’ which need not be a set only of pairs” following mathematicians.⁵⁴⁷

Various terminologies of terms and operation were set. Burch explains the fundamental part of PAL formalism by introducing the terms: primitive terms, elements, and arrays. In summary, primitive terms are “that are intended to stand for relations of all integer adicities $n \geq 1$. The relation is held by adicity, which comprises the construction of further relations eventually these relations are the source of meaning. Elements are “terms formed from primitive terms by finitely iterated application of certain Peircean Operations.” And arrays consist of elements which is a finite sequence of length $k \geq 1$. The following paragraphs are summarize and interpreted explanation of these terms.

“PAL is to be understood to possess, for each adicity $n \geq 1$ an infinite number of primitive terms R_i^n (Where i is an index from the index set of positive natural number, n is the adicity of both the terms and of any relation for which the terms may be

⁵⁴³ Ibid., 5.

⁵⁴⁴ Ibid.

⁵⁴⁵ Ibid., 6.

⁵⁴⁶ Ibid., 8.

⁵⁴⁷ Ibid., 7-8.

understood to stand.) The term in PAL is written as: $R_i(X_1, X_2, \dots, X_n)$. In addition, Burch noted certain constant primitive terms of PAL including U^1 that (“denote the monadic universal relation $UNIV^1$,”) U^2 (“denote dyadic universal relation $UNIV^2$ ”), I^2 (“denote dyadic identity relation ID^2 ”), I^3 (“denote the triadic identity relation ID^3 ”), and so on. He explained above terms with quantificational logic.⁵⁴⁸

The elements are further categorized as *Operations* including *Negation*, *Permutation*, *Join₁*, and *Join₂*. *Join₁* and *Join₂* “are called *Junction Operations*” as well.⁵⁴⁹ “ $NEG(R_i^n)$ expresses the negation of the relation expressed by R_i^n .” $PERM_i^n$ is applied to a term of PAL, which “expresses the relation that is affiliated with the relation expressed by the term in such a way that the result’s hooks are in the order obtained by permuting the hooks of that term in accord with the permutation to which $PERM$ in corresponds.”⁵⁵⁰ In case of dyadic relation, it is described as: $PERM_i^2(R_j^2)$ (Where: R_j^2 is a dyadic term.). For Junction Operations, he emphasis that are “unique to PAL and are the keys to its potential for amalgamating logic with topology. *Join₁* symbol is J_1^{ij} and that of *Join₂* is J_2^{ij} . “*Join₁* is to be understood to represent an operation on a single relation of adicity ≥ 2 , with “selective deletion” and “relation is produced that is of adicity 2 less than the relation operated. While *Join₂* is to be understood to represent an operation on a pair of relations, each of adicity ≥ 1 , with “selective deletion” and relation is produced that of adicity 2 less than the sum of the adicities of the relations of the pair. In here we can see that the relation has the analogy of *Valency formula* and *ion* concept. Burch defines an element of PAL (Definition 2.1, page 13): “An element of PAL is an element-candidate of PAL such that there is an elementary derivation of it” that is consistent with adicity. An element-candidate and an elementary derivation are defined by taking (E) instead of (R_i^n) for each element including Primitive term of PAL, Negation, Permutation, *Join₁*,

⁵⁴⁸ Ibid., 9-10.

⁵⁴⁹ Ibid., 10.

⁵⁵⁰ Ibid., 11.

and Join₂. “Where E is some previous member of the sequence.” I took (E) as finite sequence by the definition of element he describes.⁵⁵¹

Before interpreting an Array, Burch introduced the six properties of term of PAL (not primitive term of PAL which I understood as hierarchical and recursive structure of PAL logic) including: *Adicity*, *Size*, *Edge Count*, *Vertex Count*, *Chorisis*, and *Cyclosis*. “The adicity of an element E of PAL is obtained by summing the adicities of all the primitive terms of occurrent in E.”⁵⁵² The size of an element E is 1 if its adicity is ≥ 1 and 0 if its adicity is 0. The edge count of an E is the number of junction operations occurrences of primitive terms in it. The vertex count of an element E is the number of occurrences of primitive terms in it. The chorisis of an element E is always 1. The cyclosis of an element E is the number of occurrences of Join₁ in it.”⁵⁵³ As the results he proved theorems including Theorem 2.1 (Valency Rule Theorem for elements of PAL): $\text{Adicity}(E_{p+1}) = \text{Adicity}(E_i) + \text{Adicity}(E_j) - 2$, Theorem 2.2 (Census Theorem for elements of PAL): $e - v + p - n = 0$ (where: e, v, p, and n are edge count, vertex count, chorisis, and cyclosis respectively.)⁵⁵⁴

Regarding arrays he uses associative operation, “Zusammenfügung operation” in order to explain the idea of ‘to retract’ to an array. He noted “if α is any array of PAL, then α will be said to retract to an array β . The array β will be said to be the results of retracting α . The situation is that 0-adic element will be always eliminated by retracting in short and shorting array’s length “(that is, its chorisis).” And this retraction will be applied to all other elements; other words all elements “may be extended so as to be applicable to arrays of PAL.”⁵⁵⁵

⁵⁵¹ Ibid., 11-13.

⁵⁵² Ibid., 13.

⁵⁵³ Ibid.

⁵⁵⁴ Ibid., 15.

⁵⁵⁵ Ibid., 17.

In addition to the elements, the notion of Assembly was introduced. “Assemblies are crucial in connecting PAL with topology by means of graphical syntaxes.”⁵⁵⁶ By taking the logic of equivalence relation (letting $\alpha \approx \beta$), in case that the elements occurs exactly same times in α and β for all E_i in a sets of elements (ξ), “this equivalent relation partitions that set of arrays consisting of elements ... into equivalent class. Each such equivalent class will be called an assembly consisting of elements of ξ .”⁵⁵⁷ Then, six property notions’ applicability is extended from *array* to *assembly*. Accordingly two theorems are proved by him which are including Theorem 2.3 (Valency Rule Theorem for Arrays and Assemblies of PAL) Theorem 2.4 (Consensus Theorem for Arrays and Assemblies of PAL).⁵⁵⁸

Toward the end of this section the meaning of “standing for” was discussed. According to the explanation, “terms of PAL both *express* relations and *represent* relations. And the constant terms of PAL will be said to denote relations while the array of PAL will be said to depict sequences of relations. He uses quantification logic to explain a primitive terms, elements, and array of PAL in terms of the notion of *express*.”⁵⁵⁹

VI.5.4 Extensional Semantics (Section 3)

Two stages semantics structure of PAL consists of “extensional semantics” and “intensional semantics” In summary extensional semantics deals with denoting appearance. While intensional semantics involves the notion of possible world which can be some sort of metaphysical interpretation. It can be simply the difference between denotation and connotation at some occasion. In this section Burch explains “an extensional semantics” with interpreted PAL as “class of n-tuples” “over domain D.” He described that “an Enterpretation of PAL will be regarded as a pair $(D, *)$, with D being a certain sort of set and with * being a function from terms of PAL to finite sequences of what will be called “classes of n-tuples” over D, with * being * satisfying certain

⁵⁵⁶ Ibid., 19.

⁵⁵⁷ Ibid.

⁵⁵⁸ Ibid., 21.

⁵⁵⁹ Ibid., 21-24.

conditions.” And “Interpretation of PAL will emerge as an assignment to each of PAL, of a sequence of ‘relations-simpliciter’, with the assignment satisfying certain conditions analogous to those that the functions of ‘Enterpretations satisfy.” “Relations-simpliciter” is relevant to modal semantics.⁵⁶⁰

For a background theory, Burch is with sets theory ZFC (Zermelo-Fraenkel set theory). The basic theory explanation as follows: “A function $f: S \rightarrow S'$ from the non-empty set S to the non-empty set S' is a set of ordered pairs (s, s') such that s is a member of S and s' is a member of S' ; such that, if (s, s'_1) and (s, s'_2) are both member of f , then $s'_1 = s'_2$; and such that for all s in S there exists some (s, s') in f .”⁵⁶¹ He extended this theory to “a class of n -tuples over D ” by matrices of n -tuples, column vectors of it, analogy of an array of PAL, and so on. In order to define retraction he introduced “Cartesian Product.” For further requirements of PAL he stated four types of operations on class of n -tuples over a domain D : complementation, permutations, and “Cartesian Product,” and selective double deletion.” After proving three propositions he noted that “the exact notion of an Enterpretation for PAL allows us to define exactly the sense in which terms of PAL depict, represent, and express. These notions will be explicitly defined in connection with an arbitrary array.”⁵⁶²

Three levels of semantics (depiction, representation, and expression), are defined by Burch is shown in the following:

“Let any array α of PAL be given. Also, let an Enterpretation $(D, *)$ for PAL given. Then:

- (1) α will be said *extensionally to depict, with regard to $(D, *)$ the sequence of classes of n -tuples $*(\alpha)$ over D* ;
- (2) α will be said *extensionally to represent, with regard to $(D, *)$ the class of n -tuples $CP[*(\alpha)]$ over D* ; and

⁵⁶⁰ Ibid., 27.

⁵⁶¹ Ibid., 28.

⁵⁶² Ibid., 28-31.

(3) α will be said *extensionally to express, with regard to (D, *)* the class of n-tuples $CP\{Ret[*](\alpha)\}$ over D.”⁵⁶³

He showed the three levels of extensional semantics for PAL for the elements to depict, represent, and express. He proved the above definitions.

VI.5.5 Intensional Semantics (Section 4)

This section is a continuation from the previous section which deals “Enterpretation.” He introduced the concept of “relation-simpliciter” in order to theorize *intensional semantics* of PAL, interpretation function. Enterpretation is extensional while interpretation is intensional. He uses “informal concept of ‘Possible World’ and with the informal concept of ‘the collection W of all possible worlds.” “Each possible world has w in W has its domain D_w .” Meaning may be created with n-tuples over D_w . He demonstrated that “an n-adic relation” to be “identified with a specification for each possible world.”⁵⁶⁴ Relation-simpliciter are taken as Cartesian Product and defined that “A relation-simpliciter \mathfrak{R} of adicity k will be said to be composite” and make Cartesian Product $X_w^n \times Y_w^m$ of class of n-tuples X_w^n over D_w and Y_w^m over D_w .⁵⁶⁵

He explained several important properties of relations-simpliciter including composite which an adicity number can be composed with Cartesian Product, degenerate that is defined “A relation-simpliciter \mathfrak{R} of adicity k is, by definition, degenerate if and only if there are j integers (with $2 \leq j \leq k$) n_1, n_2, \dots, n_j with each n_i such that $1 \leq n_i \leq 2$ and with $n_1 + n_2 + \dots + n_j = k$.”⁵⁶⁶ Consequently involving array α which is an element he stated that interpretation ι works in the following ways:

- (1) α will be said to *depict on ι* the *sequence of relations* $\iota(\alpha)$;
- (2) α will be said to *represent on ι* the *relation* $CP[\iota(\alpha)]$; and
- (3) α will be said to *express on ι* the *relation* $CP\{Ret[\iota(\alpha)]\}$ ⁵⁶⁷

⁵⁶³ Ibid., 37-38.

⁵⁶⁴ Ibid., 39.

⁵⁶⁵ Ibid., 46.

⁵⁶⁶ Ibid., 47.

⁵⁶⁷ Ibid., 48.

He showed the three levels of intensional semantics for PAL for the elements to depict, represent, and express. He proved the above definitions.

VI.5.6 Degeneracy and the Constructibility of Relations (Section 5)

To understand Peircean way of reduction Burch explains the notion of constructibility. The notion of constructability is defined as that “the notion of constructibility of relations is define by means of the notion of the *constructibility* of terms of PAL.”⁵⁶⁸ Collective Peircean Operations of Derivation (or Construction) are defined with the six immediate derivatives, which provide the following deliverables: (1) Identity, (2) Negation, (3) Permutation, (4) Join₁, (5) Join₂, and (6) Iteration. These derivatives are resulted from *an application* correspondingly.

Then, the proof of “constructible from” and “reducible to” are demonstrated in the following levels: A term t of PAL is constructible from a set of elements \mathbf{E} and reducible to the element E , A relation \mathbf{R} is constructible from a set of relations $\mathbf{R} = \{\mathfrak{R}_1, \mathfrak{R}_2, \dots, \mathfrak{R}_k\}$ and reducible to the relations in \mathbf{R} . Furthermore, he verified that: “there are no reducible 0-adic or 1-adic (monadic) terms (Theorem 5.1), “there are reducible terms of all adicities n , for $n \geq 2$ ” (Theorem 5.2), “there are reducible relations of all adicities n , for $n \geq 2$ ” (Corollary 5.2.1), and “no terms of odd adicity can be constructed from a set of elements all of which are of even adicity” (Theorem 5.3).⁵⁶⁹

Regarding dyadic and triadic relations Burch described and proved the following theorems: “A dyadic relation is reducible if and only if it is degenerate” (Theorem 5.4), and “A triadic relation is reducible if and only if it is degenerate” (Theorem 5.5). For dyadic relations an array β in assembly B must have 2 adicities and 2 sizes to express R (relations) on ι (relation simpliciter). For triadic relations, he concluded “the only triadic relations “that are constructible exclusively from 0-adic, monadic, and/or dyadic

⁵⁶⁸ Ibid., 53.

⁵⁶⁹ Ibid., 57.

relations are relations expressible by one of the form”⁵⁷⁰ are the degenerate triadic relations:

$$P_1 \circ R_2;$$

$$P_2 \circ P_1;$$

$$P_1 \circ Q_1 \circ N_1.$$

VI.5.7 The Existence of Non-degenerate Relations (Section 6)

Burch proved that relations are degenerated by the relation with the adicities 1 and/or 2. He explained further there is another case, the existence of non-degenerate relations. He uses 1-tuples X_1 over D for X^k a class of k -tuples over D such as $X^k = X^1 \times X^1 \times X^1 \times \dots \times X^1$. He proved fundamentally that above X^k is not that of Cartesian Product $X^n \times Y^m$. As the result he proved “on the assumption that the model structure $M = (W, D)$ for PAL contains at least one domain D_w of cardinality ≥ 2 , it follows that for all $k \geq 2$ the relation ID^k , denoted by the term I^k , is non-degenerate. And similarly NEG (I^k) is non-degenerate.”⁵⁷¹

VI.5.8 Teridentity, The Comma Operator, and Derived Elements (Section 7)

At the beginning of this chapter he plainly rephrased that “whatever relations of adicity three or higher that we can construct from monadic and dyadic relations alone are all degenerate relations, whereas there are non-degenerate ... relations of all adicities.”⁵⁷² Then, remind us that teridentity I^3 relations are among non-degenerate triadic relations. As he described “this relation assumes a central role in the proof of the Peirce-inspired reduction thesis.”⁵⁷³ Regarding the truthfulness of teridentity, it is necessary to consider

⁵⁷⁰ Ibid., 64.

⁵⁷¹ Ibid., 67-69.

⁵⁷² Ibid., 71.

⁵⁷³ Ibid.

the issues in genuine relations or not genuine. Teridentity is a relation of real triadic; other scholars and philosophers are discussing theoretical and logical approach.⁵⁷⁴

Burch proved the following theorems for triadic relations: “From the set of relations consisting of the teridentity relation ID^3 alone, all the identity relations ID^n , for $n \geq 2$ may be constructed” (Theorem 7.1),⁵⁷⁵ “From the set of relations consisting of the teridentity relation ID^3 alone, the universal relations $UNIV^n$, for all $n \geq 1$, denoted by U^n for all $n \geq 1$, respectively may be constructed” (Theorem 7.2).⁵⁷⁶ “For the proof of the Representation Theorem” Burch uses “quantificational logic (that is, first-order predicate logic with identity)” with this teridentity.⁵⁷⁷ For defining corresponding operations on terms of PAL he introduced Comma Operator, Quantification Operator, operator ADID, operator HOOKID.⁵⁷⁸ And, “these operations are defined from the Peircean operation together with the primitive term I^3 ”⁵⁷⁹ Next, he introduced operator PRODUCT which enables us to treat all arrays as single elements, and “in concert with HOOKID” allows us “to form generalized conjunctions.”⁵⁸⁰ In the final part of this section he introduced Boolean Product, which consists of “two elements of the same adicity n for quantificational logic.”⁵⁸¹

VI.5.9 A Representation Theorem for Peircean Algebraic Logic (Section 8)

Burch verified the underlined rationality of this thesis. The base of this rationality is, he described as “canonical vehicle for semeiosis,” “first-order predicate logic with identity” called “quantificational logic” (QL). The main logical idea is that each predicate symbol R_j^n of adicity n of QL correlates a primitive term R_j^n of adicity n of PAL, then “Well-

⁵⁷⁴ Jacqueline Brunning, "Genuine Triads and Teridentity," in *Studies in the Logic of Charles Sanders Peirce*, ed. Nathan Houser, Don D. Roberts, and James Van Evra (Bloomington, IN: Indiana University Press, 1997), 252-63. Regarding truthfulness of teridentity Jacqueline Brunning describe genuine triad.

⁵⁷⁵ Burch, *Peirce's Reduction Thesis: The Foundation of Topological Logic*, 72-73.

⁵⁷⁶ *Ibid.*, 73.

⁵⁷⁷ *Ibid.*, 75.

⁵⁷⁸ *Ibid.*, 76-86.

⁵⁷⁹ *Ibid.*, 76.

⁵⁸⁰ *Ibid.*, 88.

⁵⁸¹ *Ibid.*, 92.

formed QL is translatable into a term of PAL.” This means that “corresponding to any well-formed formula w of quantificational logic, there is the term t of PAL that is a *translation* of w ”.⁵⁸²

He proved “Representation Theorem for PAL” (Theorem 8.1, page 102), “ w be a well-formed formula of QL of the sort specified.” “ $M = (D, F)$ be any interpretation of PAL”, “ M determines a notion of truth (truth-in- M) for all well-formed formulae.”⁵⁸³ Then, consequently he proved “ $f(w) \approx *_{fD}(t)$ ”. Where “ D is a non-empty set and F is a function mapping each n -adic predicate symbol R_i^n of QL to a subset of D^n ”⁵⁸⁴, $f(w)$ is a “expression for w ” and f is determined by F , t is “*the translation of w in PAL*” ... and $(D, *_{fD})$ to be the corresponding Interpretation of PAL.”⁵⁸⁵ He used PRODUCT, QUANT, HOOKID to construct term t of PAL corresponding to $f(w)$ in the various conditions such as negation, closed sentence of QL, two terms of PAL ($f(w_1)$ & $f(w_2)$), whether domain D contains truth value or not. Correlation between R_j^n and R_j^n was made under “dyadic identity relation,” I^2 .⁵⁸⁶

VI.5.10 Hypostatic Abstraction and the Reduction Theorem (Section 9)

The triadic relation is involved and “the idea of ‘expressing relations’ will be understood” “in terms of the semantics for PAL.”⁵⁸⁷ Burch described “all relations may be expressed as construction from relations exclusively of adicities 1, 2, and 3.”⁵⁸⁸ Burch opposed “Arthur Skidmore’s attack on Peirce’s reduction thesis” claiming that his work is deceptive because of “the absent of the triadic.”⁵⁸⁹ He described “the underlying idea of the reduction thesis of this work is that hypostatic abstraction should be universally available, ... hypostatic abstraction should be applicable to any relation of any adicity n

⁵⁸² Ibid., 93.

⁵⁸³ Ibid., 96.

⁵⁸⁴ Ibid.

⁵⁸⁵ Ibid., 102.

⁵⁸⁶ Ibid., 96-103.

⁵⁸⁷ Ibid., 105.

⁵⁸⁸ Ibid.

⁵⁸⁹ Ibid., 107.

≥ 1 ”,⁵⁹⁰ and “hypostatic abstraction involves in every case QUANT, HOOKID, and PRODUCT, all of which are definable in PAL only through the teridentity relation.”⁵⁹¹ “Hypostatic abstraction is to replace a relation of adicity n with a certain kind of combination of one monadic relation and n dyadic relations in which a single existential quantification is involved.”⁵⁹² Its general formula is “expressed by a primitive term R^n of PAL” as follows:

$$\text{QUANT}^1 \{ \text{HOOKID}^{1,3,5,\dots,2n+1} [(n+1) \text{PRODUCT}(\mathbf{R}^1, I_1^2, I_2^2, \dots, I_n^2)] \}$$

where \mathbf{R}^1 stands for monadic relation “being an obtaining of the relation that R^n expresses, “ ; I_1^2 stands for the dyadic relation “being the occupant of the first adicity place (hook) of _____”; I_2^2 stands for the dyadic stands for the dyadic relation “being the occupant of the first adicity place (hook) of _____” ; and so forth.”⁵⁹³

Applying the hypostatic abstraction, he brought the effect “asserting that there are entities considered to be *new*, that is, beyond the entities in D ”⁵⁹⁴ for given Enterpretation $(D, *)$ of PAL. He defined:

“ R^n be any primitive terms of PAL, And let any Enterpretation $(D, *)$ be given. Then, the augmentation of $(D, *)$ by hypostatic abstraction with respect to the term R^n is the Enterpretation $(D^+, *^+)$, where $D^+ = D \cup *(R^n)$, and where $n + 1$ new primitive that are added to PAL, namely $R^1, I_1^2, I_2^2, \dots, I_n^2$,”⁵⁹⁵

Proved theorems by him as follows:

“Any class X^n of n -tuples, for $n \geq 1$, over any set D not containing either of the truth values T, \perp is constructible from classes of n -tuples of adicities 1, 2, and 3 exclusively.” (Extensional Reduction Theorem for PAL; Theorem 9.1)⁵⁹⁶

“Let X^n be any class of n -tuples for $n \geq 1$, over any domain D of Enterpretation; and let the cardinality of D be at least as great as the cardinality of X^n . Then,

⁵⁹⁰ Ibid., 106.

⁵⁹¹ Ibid., 107.

⁵⁹² Ibid., 106.

⁵⁹³ Ibid.

⁵⁹⁴ Ibid., 107.

⁵⁹⁵ Ibid., 108.

⁵⁹⁶ Ibid., 109.

there is a term t^n of adicity n of PAL that is constructible entirely from terms of PAL of adicities 1, 2, and/or 3, such that some Interpretation $(D, *)$, $*(t^n) = X^n$.”
 (Using Herzberger’s Theorem “with minor differences”, Theorem 9.2) ⁵⁹⁷

Regarding the proof of Herzberger’s Theorem Burch explained that “the correct Peircean account of reduction to the triadic really should contain the Herzbergerian limitation,” “because hypostatic abstraction always introduces new entities (the *obtainings* of relations).” ⁵⁹⁸ Therefore, he defined:

“Let R^n be any primitive terms of PAL. And let any Interpretation ι be given. Then, *the augmentation of ι by hypostatic abstraction with respect to the term R^n* is the interpretation ι^+ , described as follows. First, let the model structure $M = (W, D)$ be augmented to produce the model structure $M^+ = (W, D^+)$ such that for each w in W , $D_w^+ = D_w \cup [\iota(R^n)](w)$. Then, ι^+ is the Interpretation by which, for every w in W , terms of PAL together with $n + 1$ new primitive terms that are added to PAL.....”⁵⁹⁹

Proved theorems by him as follows:

“Any relation \mathfrak{R} , of adicity $n \geq 1$, is constructible from relation of adicities 1, 2, and 3 exclusively, in the following sense. Let such a relation \mathfrak{R} be given. And let a Primitive term R^n , of adicity n , of PAL be given. Then there is an Interpretation ι of PAL such that $\iota(R^n) = \mathfrak{R}$, and such that ι satisfies the following condition. Let ι^+ be the augmentation of ι by hypostatic abstraction with respect to the term R^n , with the primitive terms $\mathbf{R}^1, I_1^2, I_2^2, \dots, I_n^2$ being as specified in the definition of ι^+ . Then the relation $\mathfrak{R} = \iota(R^n)$ expressed on ι by R_n is also expressed on ι^+ by $\text{QUANT}^1 \{ \text{HOOKID}^{1,3,5,\dots,2n+1} [(n+1) \text{PRODUCT}(\mathbf{R}^1, I_1^2, I_2^2, \dots, I_n^2)] \}$
 That is to say, $\mathfrak{R} = \iota(R^n) =$

⁵⁹⁷ Ibid., 110.

⁵⁹⁸ Ibid., 113.

⁵⁹⁹ Ibid. This is important for the meaning generation through the process of hypostatic abstraction that always needs new entities in order to be an augmentation of interpretation. Then, relations will be possible to be expressed.

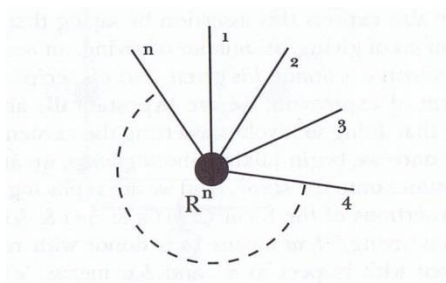
$\iota^+[\text{QUANT}^1\{\text{HOOKID}^{1,3,5,\dots,2n+1}[(n+1)\text{PRODUCT}(\mathbf{R}^1, I_1^2, I_2^2, \dots, I_n^2)]\}]$
 (Intensional Reduction Theorem for PAL, Theorem 9.3) ⁶⁰⁰

Burch further continued to prove Intensional Herzberger Theorem:

“Let \mathfrak{R} be any relation of adicity $n \geq 1$ such that, for all w in W , the cardinality of D_w is at least as great as the cardinality of $\mathfrak{R}(w)$. Then, there is a term t^n of adicity n of PAL that is constructible entirely from terms of PAL of adicities 1, 2, and /or 3, such that for some Interpretation ι , $\iota(t^n) = \mathfrak{R}$. This means that, if $n \geq 3$, \mathfrak{R} is reducible to relations of adicities 1, 2, and/or 3.” (Intensional Herzberger Theorem, Theorem 9.4) ⁶⁰¹

Finally he mentioned the possibility of various forms of hypostatic abstraction by stating that “this form of hypostatic abstraction is not, however, the only form; nor is it the only form that is usable to prove the reduction of all relations to the triadic, dyadic, and monadic.” ⁶⁰² The simplified figure of the process of hypostatic abstraction is shown in **Figure 2** and **Figure 3**. The n -adic term can be replaced by the same n -adic result of hypostatic abstraction.

Figure 2: Original n -adic Term ⁶⁰³



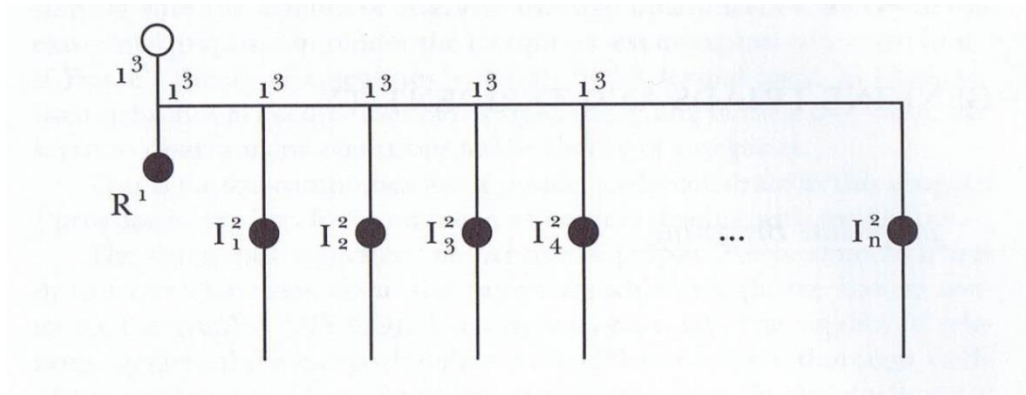
⁶⁰⁰ Ibid., 114.

⁶⁰¹ Ibid.

⁶⁰² Ibid., 115.

⁶⁰³ The original n -adic term. See "Peirce's Reduction Thesis," in *Studies in the Logic of Charles Sanders Peirce*, ed. Nathan Houser, Don D. Roberts, and James Van Evra (Bloomington, IN: Indiana University Press, 1997), 250. The Permission received from Indiana University press. Courtesy of Indiana University Press. All rights reserved.

Figure 3: Hypostatic Abstraction Result ⁶⁰⁴



VI.5.11 Thirdness and the Consistency of the Reduction Thesis of This Work with other Results in Logic (Section 10)

Regarding “the consistency of the result of this work with actual and potential reductions of all relations to relations that are purely of adicity ≤ 2 ” ⁶⁰⁵, Burch focused on the non-degenerate triadicity which is also of the property of “the teridentity relation denoted by I^3 .” ⁶⁰⁶ As he described “whether Thirdness in this sense is similar to what Peirce himself understood by his metaphysical category of Thirdness is an issue.” ⁶⁰⁷ Although Thirdness investigations are reserved for another work for him, the importance for the connection to this thesis is maintained. He advocates that “Thirdness is ‘involved’ in anything that is dependent in a certain way upon any non-degenerate triadic relation” such as “in any operation or procedure ... to obtaining relations from other relations” in PAL and “Thirdness may be involved ... in the operations and definitions of logical mathematical systems.” ⁶⁰⁸ In this sense, the meaning of *obtaining* must respond to the previous section’s hypostatic abstraction, new terms’ accretion to a domain from that of beyond. It might be understood that this hypostatic abstraction is itself pragmatic process even if he admitted that “in order to acquire skill at identifying operations and

⁶⁰⁴ The result of Hypostatic Abstraction that replaces the original n-adic term shows the same number of adicity, n-adic. See *ibid.*, 251. The Permission received from Indiana University press. Courtesy of Indiana University Press. All rights reserved.

⁶⁰⁵ *Peirce's Reduction Thesis: The Foundation of Topological Logic*, 117.

⁶⁰⁶ *Ibid.*

⁶⁰⁷ *Ibid.*

⁶⁰⁸ *Ibid.*

procedures that involve Thirdness in this sense, we must keep in mind principally the negative parts of the reduction thesis of this work.” He justified that “reductions that do involve Thirdness in this sense are not only ... not inconsistent with the reduction thesis of this work: their results may also even be implied by the reduction thesis of this work.” Therefore, the rationality of the involvement of Thirdness is “may be sufficiently ‘powerful’ to allow for the reduction of all relations to relations exclusively of adicities ≤ 2 .”⁶⁰⁹

Now, in order to involve Thirdness under the assumption that “model structure $M = (W, D)$ is such that for at least on w in W , D_w contains more than 1 member,”⁶¹⁰ Burch approximated the following theorems and their relevant corollaries which are limited constructibility of adicity not other than odd adicities and the number of adicity no more than 2. Recalling previous sections, the original theorems and relevant corollaries are:

Theorem 5.3: “No terms of *odd* adicity can be constructed from a set of elements all of which are of *even* adicity,”⁶¹¹

related Corollary 5.3.2: “no terms of odd adicity can be reduced to a set of elements of exclusively adicity 2,”⁶¹²

theorem 5.4: “a dyadic relation is reducible if and only if it is degenerate,”⁶¹³

its related Corollary 5.5.1: “a relation of adicity ≥ 3 is reducible to a set exclusively of 0-adic, monadic, and /or dyadic relations if it is degenerate,”⁶¹⁴

theorem 6.4: “on the assumption that the model structure $M = (W, D)$ for PAL contains at least one domain D_w of cardinality ≥ 2 , it follows that for all $k \geq 2$ the relation ID^k , denoted by the term I^k , is non-degenerate,”⁶¹⁵

⁶⁰⁹ Ibid., 118.

⁶¹⁰ Ibid., 118.

⁶¹¹ Ibid., 57.

⁶¹² Ibid., 58.

⁶¹³ Ibid., 59.

⁶¹⁴ Ibid., 63.

⁶¹⁵ Ibid., 70.

and theorem 6.5: “on the assumption that the model structure $M = (W, D)$ for PAL contains at least one domain D_w of cardinality ≥ 2 , it follows that for all $k \geq 2$ the relation denoted by the term $NEG(I^k)$ is non-degenerate.”⁶¹⁶

Furthermore, Burch exemplified the rationality of the involvement of Thirdness including the following: “(1) any convention, rules of construction, or rule for the formation of well-formed formulae”, “(2) the ‘Streichung’ operation of Bernays”, “(3) the formation of Boolean Products”, “(4) the ‘Triple-Junction’ operation of A.B. Kempe”, “(5) quantification”⁶¹⁷

After all considering “the reductions to the dyadic of Leopold Löwenheim and the reduction to the dyadic of W.V.O. Quine,” Burch concluded as follows:

“Löwenheim’s system incorporates Thirdness in its methods of construction from the beginning, so that his reduction to the dyadic does not, as such, conflict with the reduction thesis of this work.”⁶¹⁸

“Quine’s methods for constructing relations from relations involves Thirdness throughout. These methods are formulated by using devices like quantificational and the identification of free variables. Because Quine’s methods involve Thirdness at the outset, Quine’s results as such is not inconsistent with the reduction thesis of this work.”⁶¹⁹

Although Burch questioned formalizable “second-order or higher-order” quantificational language for PAL, “if, however, an alleged ‘procedure’ of relational construction or reduction is not formalizable in *any-order* language, then the question arises whether the alleged ‘procedure’ is really a procedure at all.”⁶²⁰ Burch finalized his “Theses: All Procedures of relational construction are formalizable in PAL.”⁶²¹

⁶¹⁶ Ibid.

⁶¹⁷ Ibid., 120.

⁶¹⁸ Ibid., 120-121.

⁶¹⁹ Ibid., 120.

⁶²⁰ Ibid., 121.

⁶²¹ Ibid., 122.

VI.5.12 Two System of Graphical Syntax for Peircean Algebraic Logic (Section 11)

Originally both the motivation and requirement to read this thesis brought from this section for the intuitive understanding of PAL using this Graphical System of PAL. Burch presented “two systems of graphical syntax for PAL” developed from the original “system of Existential Graphs that Peirce developed in the late 1890s”⁶²² in order to realize his “goals of the graphical syntax for PAL is to represent pictorially both the primitive terms of PAL and the operation of PAL.”⁶²³ In spite of the limitation that “notation is linear, with a graphical syntax, whose notation is 2-dimensional,”⁶²⁴ it is extremely helpful to understand the syntax of PAL. The introduced two systems are: (1) graphical system that “the primitive terms of PAL are drawn as spots with lines radiating out form them” (**Figure 4**), and (2) “the primitive terms of PAL are drawn as spots with holes punctured around their edges”⁶²⁵ (**Figure 5**). In addition, the magnification of the primitive terms (**Figure 6**) is introduced by him.

In short, the following primitive terms, elements, operations are presented in the thesis: Primitive Term, Junction Operations including Join_1 and Join_2 , Identity relations including ID^2 and ID^4 , Enterpretation (D,*), Permutation, Negation, PRODUCT operator, COMMA operator, QUANT operator, ADID operator, and HOOKID operator. He mentioned “readers should now be able to draw in graphical syntax any of the constructions appearing in the algebraic presentation of PAL.”⁶²⁶ The application of these operations is shown in the **Figure 7**.

⁶²² Ibid., 123.

⁶²³ Ibid.

⁶²⁴ Ibid.

⁶²⁵ Ibid., 124.

⁶²⁶ Ibid., 134.

Figure 4: Primitive Term Example 1 ⁶²⁷

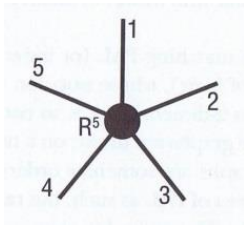


Figure 5: Primitive Term Example 2 ⁶²⁸



Figure 6: Primitive Term Example 3 ⁶²⁹

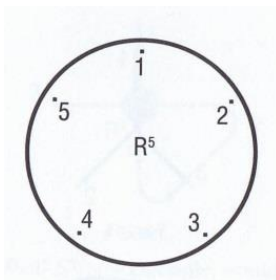
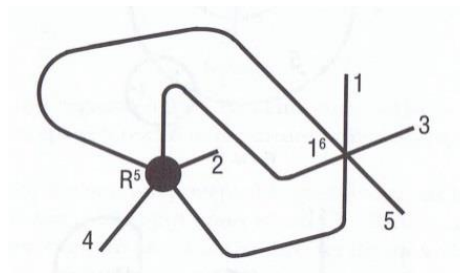


Figure 7: Graphical Syntax Example ⁶³⁰



VI.6 The Truthfulness of Teridentity

Burch's proof of hypostatic abstraction requires three mode of identity that includes monadic identity (as a primitive term), dyadic identity, and triadic identity (as a teridentity). These three complete set of identities need to be ready to provide to the system of PAL. Otherwise, the process of hypostatic abstraction cannot be made appropriately. Now it is necessary to verify the truthfulness of these three identities. This verifying process also requires truthful understanding of thirdness mode. I must

⁶²⁷ Ibid., 124. The Permission received from Texas Tech University press. Courtesy of Texas Tech University Press. All rights reserved.

⁶²⁸ Ibid. The Permission received from Texas Tech University press. Courtesy of Texas Tech University Press. All rights reserved.

⁶²⁹ Ibid., 125. The Permission received from Texas Tech University press. Courtesy of Texas Tech University Press. All rights reserved.

⁶³⁰ Ibid., 134. The Permission received from Texas Tech University press. Courtesy of Texas Tech University Press. All rights reserved.

recall Burch's notion of thirdness involvement to reduction process. It is also meaningful to extend the discussion to the language theory discourse regarding dyadic sign verses that of triadic to draw out a truthfulness of teridentity (triadic mode of identity). Regarding Peircean philosopher's discussion on teridentity and mode of identity to be truthful, Jacqueline Brunning summarized: "Peirce's doctrine of categories is a logico-metaphysical claim that all though and all reality is partitioned into three mutually exclusive and jointly exhaustive classes: monads, dyads, and triads. This doctrine is a conjunction of two claims. The first is a definitional claim that all polyads of degree greater than three are constructed from triads. ... This claim remains untouched by developments in logic. The second is an irreducibility claim for dyads and triads."⁶³¹ The second claim is proved and it relates the need of third categories of Peirce according to Bunning. Burch also discussed genuine relations and reducibility that required the existence of teridentity for the proof of PAL and the need of thirdness mode. I hold this claim because of possible mode similarity and difference between architecture and pure logic. In short, all architecture is unique in terms of condition and creative intention. Therefore, none of elements are reducible in this sense. However, our constructive mode of architecture perhaps needs categorization and systemic approach to reach this uniqueness. In that sense, reducibility is a necessary means for creation. Thus, I support Peircean logic to use three kinds of Identities including monadic, dyadic, and teridentity (triadic identity). I adapted this concept for the model of architectural hypostatic abstraction that consists of architectural monadic identity, architectural dyadic identity, and architectural triadic identity. In the first half of next chapter is dedicated to the treatise in constructing simplified model for sematic model of architecture and architectural hypostatic abstraction.

⁶³¹ Brunning, "Genuine Triads and Teridentity," 252.

CHAPTER VII

PEIRCEAN POSTMODERN ARCHITECTURE

VII.1 Introduction

The need for a triadic architectural language is legitimated due to the application of philosophy of language on architectural language was not appropriate. Theorists of architecture confused Peircean semeiotic (*triadic sign*) and Saussurean semiology (*dyadic sign*). I have described the background of this confusion was related to the language model in Charles Morris' and Umberto Eco's sign theory in Chapter V (*Saussurean Postmodern Architecture*). The formulation of triadic Peircean postmodern architecture has two considerations. In a broad sense these two considerations of development range from the dyadic level to that of the triadic level. At-a-glance both levels are influencing each other. Therefore, on the dyadic level it may take a triadic level subsystem, while the triadic level needs elements that consist of dyadic, or vice versa. The first is the dimension of oscillation, and the second is how a language of Peircean postmodern is systematized. The dimensions of oscillation shaped various dyadic relationships that create oppositions and reciprocal or shifting relations. These are confirmed in the general and global level relationships shaped between *rationalism* and *romanticism* with respect to the influence from philosophy on architecture. The similar shifting mode can be applicable to specific areas of phenomenon in an architectural language such as the relationship between *langue* and *parole* in Saussurean semiology⁶³² paradigm. This dyadic shifting mode is not just switching forward and backward, in triadic mode it is rather contributing to the generation of a new stage. Peircean triadic process can explain these oscillations with process. I will illustrate that an architectural aesthetic experience that takes similar process in *survival aesthetic*⁶³³ theory originated from the notion of *prospect-refuge*⁶³⁴ experience. From a psychological view regarding

⁶³² Saussure, *Course in General Linguistics*.

⁶³³ Hildebrand, *Origin of Architectural Pleasure*.

⁶³⁴ Jay Appleton, *The Experience of Landscape* (New York, NY: John Wiley & Sons, 1975).

oscillation, I focus on the *hedonic adaptation*⁶³⁵ theory that creates a stimulus value shifting baseline. This stimulus value may cause aesthetic feelings and simultaneously create a defense mechanism for the perceiver. Thus, it may be relevant to a survival aesthetic experience.

The second consideration is about the system and contents that Peircean postmodern architecture need to use for the semeiotic process in architecture. Peirce's sign theory and his logic are the key components. The existing architectural formal system serves as a kind of working hypothesis that provides the benchmarking of architectural formal semantics theory of Peircean logic. I selected this benchmarking model from the formal system of classicism architecture that contains Vitruvian taxis, genera, and symmetry. In this formal system, the notion of tripartition becomes the key idea for architectural language structure through a hierarchical system. Peircean interpretant and architectural formal tripartition are two major components that play an important role in triadic architectural language and logic. They have similar characteristics.

My treatise regarding Peircean triadic language in architecture is associated with the concept of oscillation that is applicable to mode, scale, and locality. I developed this concept based on Burch's PAL,⁶³⁶ specifically *semantics* logic and *hypostatic abstraction*⁶³⁷ (Peircean way of reduction). Semantic logic provides a model that has three levels of semantics for architectural form, and that of metaphysics (meaning of architecture). The analogy of architectural language reduction process (meaning clarification process) to Peircean abstraction guides the notion of architectural identity. This identity is a condition for meaning clarification (architectural hypostatic abstraction). For the process of oscillation in triadic logic, the process of *hypostatic abstraction* (reduction process with new entities) is necessary.

⁶³⁵ Shane Frederick, "Hedonic Adaptation," in *Well Being: The Foundation of Hedonic Psychology*, ed. Daniel Kahneman, Ed Diener, and Norbert Schwarz (New York, NY: Russell Sage Foundation, 1999), 302-29.

⁶³⁶ Burch, *Peirce's Reduction Thesis: The Foundation of Topological Logic*.

⁶³⁷ *Ibid.*

VII.2 Elements of Peircean Sign Theory and Logic

For the Peircean interpretation of architectural language captures elements related to an architectural formal system and those of Peircean sign and logic. The Peircean interpretation of architectural language may apply to the notion of tripartition that is commonly accepted for the classical formal system of architecture. The system of tripartition constitutes a formal system in a hierarchal way by guiding the formal elements of architecture. The essential function of tripartition formulates the relation of the three formal entities. This role is similar to that of Peircean interpretant except that the *interpretant* is also an origin of another sign, while tripartition stays as a system. However by definition, Peircean *interpretant* as sign can be a thought, idea. The system of tripartition is an innate idea to implement for the entire formal system. Therefore, *tripartition* and *interpretant* can share their role and possibly have mutual relationship in an architectural language system. This system constitutes physical and formal aspects of architecture formulated by tripartition as well as metaphysical (meaning) aspects by *interpretant*. The formal elements at the physical level are an object that can be perceived, while at the metaphysical level formal elements are *sign objects*, which are signs and *representamen* according to Peircean definition, which called sign as *interpretant*. Therefore, I must tackle the *interpretant* to deal with architectural form. *Interpretant* formulates three types of extension due to the mode's difference including: *immediate interpretant*, *dynamic interpretant*, and *final interpretant*. The main innate meaning of each status of *interpretant* would influence the relation to *sign object* that is architectural form. In short, *sign object* with *immediate interpretant* creates a primary result, while the *final interpretant* is decisive toward the eternal stage of meaning. *Dynamic interpretant* is between them and conducting a notion of semiosis. The role of *dynamic interpretant* is inevitable for the process of shifting and oscillating.

The philosophical influence from philosophy on architecture was described in Chapter III (*Influence of Philosophy On Architecture in 19th Through 20th Century*) illustrates the strong correlation of these two disciplines and their mutual relations. At the same time, it indicates the dimensions of oscillation in theory and in work of architecture. This

association extends the concept of *shift* that induces the evolution of *interpretant* status, and this is the role of *dynamic interpretant* in Peircean semeiotic. The oscillations between enlightenment and counter enlightenment, rationalism and romanticism in many cases have processed architectural movements one after another and the changing style of architecture of a same architect. The elements make this oscillation may be considered as a principal mechanism that makes shift and change of *interpretants' status*. More specifically in the triadic system, the status of three *interpretants* within Peircean semeiotic needs a certain mechanism to change their mode of being through monadic, dyadic, and triadic. The Peircean reduction is centrally conceptualized by the notion of '*hypostatic abstraction*' which would be one of the models that conduct this specific aim with rigorous logic in order to make a shift possible. The logical equivalency of entities called identity is one of the basic conditions for this reduction process. In architecture, I will apply this theory to an analogy in order to analyze triadic shifts that make architectural meaning clarification. In the system, architectural identities are required with certain combinations of monadic architectural identity, dyadic architectural identity, and triadic architectural identity. This model will be discussed thoroughly in the next chapter – *Case Study Analysis of Peircean Interpretation*.

In Peircean semeiotic theory, meaning derived from the guidance of interpretant. In Saussurean system, meaning is imbedded socially as a code which is called cultural units. Eco discussed this in his sign theory with comparison to Peircean interpretant as I discussed in the Chapter V (*Saussurean Postmodern Architecture*). Eco's theory, which is a dyadic model of language for this research standard; however, he did not provide a clear process of meaning generation. His attempt was explored in '*Theory of Sign Production*' that involves *theory of code changing*.⁶³⁸ Eco stated: "a theory of code-changing must take into account the public reformation of sign-function and the surreptitious code-switching performed by various rhetorical and ideological discourse."⁶³⁹ For Eco sign production is the matter of a *new type making* within the

⁶³⁸ Eco, *A Theory of Semiotics*, 152.

⁶³⁹ *Ibid.*

mode of secondness in Peircean sense. The limitation of this theory is evident from Wittgenstein in *language game*.⁶⁴⁰ Rules cannot be changed by a player. I take an alternative approach to a language system, triadic sign theory instead of dyadic. With this alternative, the sign production is possible because of oscillation and shifting process instead of reference to the code imbedded. Eco did not take a position that Saussurean notion of *parole*, utterance, is the source of creation of sign. In the Peircean language of architecture takes the relation of *langue* and *parole* because their relation is oscillating. The system of *langue* represents existing architectural language, while *parole* is that of an individual creation. Jencks and Baird followed Barthes and others to differentiate architectural *langue* and architectural *parole*.⁶⁴¹ Changing type is the result of a new creation after incorporated in the system of *langue*. Therefore, essentially Eco's approach appears not to be explaining the new creation proper. Saussurean process can be explained as an association between rationalism and romanticism. Respectfully, rationalism and romanticism are corresponding to *langue* and *parole* within the shifting process of the three stages of *interpretant*, which include *immediate*, *dynamic*, and *final interpretant*. The projection of *hypostatic abstraction* through Peircean *dynamic interpretant* is possibly applicable to the Saussure's *shifting process* between *langue* and *parole* in terms of the *meaning creation* of postmodern architecture. This process is related to the establishment of a new formal vocabulary in architecture.

Peircean semeiotic with relativity explains *interpretant* as another sign that could be a *new entity*. This additive entity processes *hypostatic abstraction*. The approach maybe relevant to the notion of shifting that takes place in the mode of being in Peircean theory, including firstness, secondness, and thirdness. I theorize this shifting is originated from the notion of oscillation with scale shifting. Peircean interpretant has a shifting process among *immediate*, *dynamic*, and *final interpretant*, or rather, these shifting can be taken within dynamic interpretant and new dynamic interpretant as the continuous infinitive process of meaning creation. In the process of hypostatic abstraction, new additive

⁶⁴⁰ Wittgenstein, *Philosophical Investigations*.

⁶⁴¹ Jencks and Baird, "'La Dimension Amoureuse' in Architecture " 43-47.

entities, which are new signs, can be taken as some versions of interpretant from immediate, dynamic, and final. The basic function of hypostatic abstraction is “to replace a relation of adicity n with a certain kind of combination of one monadic relation and n dyadic relations.”⁶⁴² In this process $n+1$ occurrence of triadic relation, called teridentity need to be also involved because of its special operation within the process of hypostatic abstraction.⁶⁴³ In short, this reduction process is that some relation is replaced with other obtaining new relations with a certain kind that is specified by triadic relations through interpretant, which is shifting regarding the mode of being. In the case of semiology, *parole* (private speaking) works for the creation of new *langue* (public language) by the process of accepting new form of *parole* to be a part of *langue* without changing the structure of language as a whole. This structuralist approach was questioned by poststructuralism with subjectivity, contextual consideration, and oscillation process that creates non-linear format. Eventually an accepted new *parole* in a new system of *langue* would change its structure. In the formal system of architecture, this process can be seen when a new style or movement evolved. Peircean semeiotic and logic can support the logical explanation of this process in the triadic mode of language.

The various types of oscillation between rational mind and romantic mind are associated with the process of oscillation between resistance and emancipation, such as the notion of critical regionalism. This implication guides the possibility that the oscillation and shifting are universal phenomena, while we hold the same oscillation in the subsequent of particular situations. This process is repetitively reversed between universal and local. This heuristic circular process will guide a theory to reach truthful reality that can be metaphysics and truthful meaning of architecture. This shifting process of *dynamic interpretant* triggers a new stage of the relations in sign itself, between sign and object, and sign and *new interpretant*. This process also generates circulation of meaning creation in various occasions by shifting scales in terms of time and space. Shifting

⁶⁴² Burch, *Peirce's Reduction Thesis: The Foundation of Topological Logic*, 106.

⁶⁴³ *Ibid.*, 107. Burch explained “for hypostatic abstraction involves in every case QUANT, HOOKID, and PRODUCT, all of which are definable in PAL only through the teridentity relation.”

various scales can be captured in the notion of hypostatic abstraction that needs replacement of the combination of three modes of identities with certain conditions. In a sense, oscillation is replacing identity with heuristic manner. Although, the notion of identity in Peircean theory holds specific logical meaning, I extended the idea of identity to the notion of “architectural identity” which were discoursed by many architectural theorists. I will describe the characteristics of architectural identity and their classifications based on the analogy of Peircean mode classification later in this Chapter. I summarized Burch’s proof regarding *hypostatic abstraction* in the Chapter VI. To illustrate Peircean interpretation with the association of various shifting processes, the relation between architecture and aesthetic and that of psychology is important to take as cases to illustrate how shifting process can be done along with Peircean semeiotic. I will describe these theories and the connection to *dynamic interpretant* and *hypostatic abstraction*. Both of them become key elements to provide the support to understand the meaning creation through architectural form, architectural identity, and possible reality attached to the interpretation of postmodern architecture in Peircean way. I will explore these elements at a more detailed level in the following sections.

VII.3 Dimension of Oscillation

Postmodern is transitory and oscillation between two opposition is recognized in many forms of expression including Saussurean semiology in the process of adaptation of parole to langue, Grant Hildebrand’s *survival aesthetic theory*⁶⁴⁴, which described cognitive foundation of pleasure and pain, the influence from a landscape architecture, Jay Appleton’s *theory of prospect-refuge*.⁶⁴⁵ The theoretical approach to understand “experiences of life pleasant or unpleasant,”⁶⁴⁶ *Hedonic psychology* analyzes individual feeling associated with pleasure and pain. Burch proved the Peircean logic, hypostatic abstraction which is central to the Peircean Algebraic Logic. I summarized his work in the previous Chapter (*Peircean Semeiotic and Semantic Logic*). The notion shows the

⁶⁴⁴ Hildebrand, *Origin of Architectural Pleasure*.

⁶⁴⁵ Appleton, *The Experience of Landscape*.

⁶⁴⁶ Kahneman, Diener, and Schwarz, *Well Being: The Foundation of Hedonic Psychology*, ix.

possibility that hypostatically our mind can shift to have reduction by adding a new set of identities (new terms in a relative sense) which reforms new combination of monadic, dyadic, and triadic relation of identity. This hypostatic abstraction process may suggest the logical process of actual adaptation and shifting. In the case of linguistics, Saussure made a distinction between *diachronic* dimension and that of *synchronic*. These two dimensions are not crossing each other in its theory. Perhaps, the role of *parole* triggers this crossover. Similarly metaphysical reality of architecture seems to violate this rule. Continuous oscillation can be seen in the reality of perceiving architecture then reflectively making conception. In the case of Peircean semeiotic, through hypostatic abstraction these two dimensions may crossover for displacement and scale shifting.

The research acknowledges the oscillation between universality and locality as described in the Chapter III (*The Influence of Philosophy on Architecture in the 19th through 20th Century*). The generality of Peircean Postmodern Architecture can be seen in the application of theories in architecture. Philosophy of enlightenment and romanticism cannot be separated; rather the situation is the combination and woven by those. The shifting from structuralism to post-structuralism, subjective mind is more focused in order to make a balance of rational and irrational mind setting. In modernism, for example Nietzsche's notion explained this point with nihilism which comes with opposing dyad, "Apollonian-Dionysiac duality."⁶⁴⁷ Between harmonious beauty and intoxicated frenzy, the human mind needs contradictive oscillation. The oscillation concept between universality and locality shares the theoretical underpinning of Critical Regionalism in architecture. Frampton's critical regionalism keeps distance from populism and objective enlightenment.⁶⁴⁸ This theory is explained as a resistance between universal and local culture with self-criticism.⁶⁴⁹ This criticism needs to be implemented under a reliable principle; otherwise, judgment is uncertain and biased. I select Peircean semeiotic and logic as a guiding principle for the criticism. The existing

⁶⁴⁷ Nietzsche, *The Birth of Tragedy and the Genealogy of Morals*, 19.

⁶⁴⁸ Frampton, "Towards a Critical Regionalism," 22.

⁶⁴⁹ David Kolb, *Postmodern Sophistication* (Chicago, IL: The University Chicago Press, 1990), 180.

context influences architecture and context burdens architecture are the result of an appreciation of cultural context because architectural identity upholds the meaning of architecture sustained by Peircean Postmodern Architecture. Acceptance of oscillation as a universal phenomenon seems not to be denied. Rather we need the underlined system of acting oscillation. This system is not limited to the subject of psychology; it is a more general idea that we ought to recognize.

VII.4 Oscillation or Determination (Dynamic Interpretant)

The universal view of Charles Sanders Peirce is triadic. All entities should be explained in this manner, this even extends to the *interpretant that holds a triadic format*. The role of interpretant is to make triadic solutions with relation to sign (*representamen*). This result, according to Peirce, also creates another sign (*new representamen*). This sign can be in firstness, secondness, and thirdness depending on the context. Therefore, interpretant (*representamen*) can be monadic, dyadic, and triadic by itself due to the selection of mode of being. While interpretant would be the origin of another interpretant within the same mode of being, it would have a chance to change to a different mode of being. If we seek a relationship to a *hermeneutic circle* it can be an endless process with ‘interpretation’ of another ‘interpretation’ as such. The question arise whether semeiotic can be used for the determination or endless oscillation. I focus on the role of *dynamic interpretant* which makes a relationship with sign to create meaning (solution) and at the same time, it can be changeable to an *immediate interpretant* and a *final interpretant*.

I surmise *dynamic interpretant* characterizes a similar process of oscillation. While the interpretant provides this changing process of mode of being, Peircean reduction (hypostatic abstraction) provides an opportunity to reduce adicity of entities in PAL through various Peircean *operations*. This process also requires new entities with a set of monadic term, dyadic and triadic identities in order to make Peircean reduction. According to Burch’s theory in PAL we should understand that while relations are maintained as fundamental, individual entities of the relations are “derivative by means

of (hypostatic) abstraction of them.”⁶⁵⁰ In other words, if we have a condition that monadic term, dyadic and triadic identity are available, the meaning will be clearer through reduction because of the result provided by the process of hypostatic abstraction.

While *dynamic interpretant* belongs to the secondness mode, hypostatic abstraction ought to be associated with thirdness mode. The necessity of thirdness involvement was discussed by Burch in order to connect PAL to be Peircean semeiotic. *Dynamic interpretant* is the secondness mode of interpretant. Peirce explained secondness mode as factuality and conflict. This secondness mode is associated with the physical and formal mode in architecture. Meantime, thirdness mode involvement for hypostatic abstraction means essentially the involvement includes terms and identity (monadic term, dyadic and triadic identities).

Burch concluded in *A Peircean Reduction Thesis*, triadic identity as a philosophical question, which requires further depth of philosophical thoughts.⁶⁵¹ I shall identify this situation as *metaphysics*, which can be recognized as architectural reality. At the beginning of this research, I stated the meaning for architecture is metaphysical. In the next section I will discuss the fundamental nature of identity along with the mechanism of three modes of identity described as a condition of hypostatic abstraction in PAL.

VII.5 Architectural Identity

Identity is important because it facilitates the communication of architecture through hypostatic abstraction with monadic, dyadic, and triadic level. I discussed this theoretical structure in the system of PAL in the previous Chapter (*Peircean Semeiotic and Semantic and Logic*). In PAL, all relationship, originate from the notion of ‘stand for’ relationship to express meaning, is constructed exclusively monadic, dyadic, and triadic adicity. In the process of communication if the clarity of meaning is conducted by Peircean reduction (hypostatic abstraction), the reduction system requires a set of three

⁶⁵⁰ Burch, *Peirce's Reduction Thesis: The Foundation of Topological Logic*, iv.

⁶⁵¹ *Ibid.*, 139.

different identities including monadic term, dyadic and triadic identities. In this section, I illustrate the essential aspects of identity for architecture in association with the notion of hypostatic abstraction. I will focus on the mechanism of “architectural identity” and its position in the field of architecture. Architectural identity is characterized paradoxically with two aspects including permanency and changing, while architectural identity structures triadic relations as the analogy of Peircean identity.

Within triadic relations we would have shifting between different scales of their context such as organism and society. In the light of pragmatism philosopher, George Herbert Mead (1863-1931) with his concept of ‘gesture’ explained *self* with two aspects including “I” and “me” which are reflectively constructing with the involvement of surroundings. The aspect of “I” is to identify self which is constantly present in our experience, while that of “me” is a *reflective self* within an environment.⁶⁵² The concept of gesture is related with his reflective communication. He explained “meaning arises and lies within the field of the relation between the gesture of a given human organism and the subsequent behavior of this organism indicated to another human organism by that gesture.”⁶⁵³ This process is socially created that involves self-consciousness. “At the level of self-consciousness such a gesture becomes a symbol”⁶⁵⁴ to enable a communication. With communication, meaning is generated. Mead’s concept of structure of meaning is triadic. The concept of triadic relation including *gesture*, *adjustive response*, and *the social act*,” he explained “the logical structure of meaning ... is to be found in the threefold relationship of gesture to *adjustive* response and the resultant of the given social act.”⁶⁵⁵ Mead’s reflective process and meaning which involves gesture is explained as the interpretation between organism and gesture. The meaning of organism primary was defined by Mead as human organism. However Mead

⁶⁵² George Herbert Mead, "The "I" and the "Me", " in *Pragmatism and Classical American Philosophy: Essential Reading & Interpretive Essays*, ed. John J Stuhr (New York, NY: Oxford University Press, 2000), 589-91.

⁶⁵³ "Meaning," in *Pragmatism and Classical American Philosophy: Essential Reading & Interpretive Essays*, ed. John J Stuhr (New York, NY: Oxford University Press, 2000), 563-64.

⁶⁵⁴ *Ibid.*, 565.

⁶⁵⁵ *Ibid.*, 566.

as social behaviorist, also organism can be understood as social organism as well. If this hypothetical extension is right, this view involves the scale shifting of my concept besides the oscillation concept of two oppositions. Gesture is both significant and non-significant, he explained, which involves self-conscious including “feeling or sensation.”⁶⁵⁶ Therefore, gesture is an ephemeral and frenzy entity in a sense, although acting as a cue to define a meaning.

Mead’s definition of “I” to identify self always involves social entity “me” in order to have meaningful social communication. Between “I” and “me” meaning will be created as an interpretation between organism and gesture; the entity of gesture is acting as symbol and sign. The relationship “I”, “me” and ‘organism’ creates triadic. Mead defined “the “I” as the response of the organism to the attitudes of the others; the “me” is the organized set of attitudes of others, which one himself assumes. The attitudes of the others constitutes the organized “me,” and then one reacts toward that as an “I”.”⁶⁵⁷ Identity is a relation or relations regarding equivalency in logic. I assume this equivalency involves a degree and transformation of equivalency. Therefore, the idea of relations presupposes some level of equivalency for identity. I would like to call this presupposition just as *relation* in this context. Mead’s triadic *relation* can be understood as two sets of triadic *relation* which is transferable to a different set by shifting scale. Primary scale is associated with organism while extended scale is gesture. Between these two, we have interpretation process reflectively. The first set of triadic relation is made by *gesture to response*, and *gesture to social act*. The second set of triadic relation is made by “I” as *the response of organism*, and “me” as *the organized set of others*. Between these two different levels of set in triadic relation, the self-reflective communication with an environment enables the role of identity. In the case of Mead, identity showed the characteristics of shifting and transitoriness.

⁶⁵⁶ Ibid.

⁶⁵⁷ “The “I” and the “Me”.”, 590.

On the common ground of ‘architectural identity,’ architectural theorists share some basic characteristics including ‘permanency,’ ‘displacement,’ and ‘metaphor.’ Architectural identity concerns the connection to ‘nature,’ ‘ethics,’ and ‘ideology.’ The degree of the identity is relevant to a frenzy character and that of authentic for forms of architecture. I will exemplify these notions and generalize the idea of architectural identity. Chris Able set identity regarding architecture as one of three movements which includes “architecture as space,” “architecture as language,” and “architecture as identity.”⁶⁵⁸ He advocates the aspect of architectural identity as culture-form “with the formation of personal, social, and cultural identity” following Charles Jencks and Umberto Eco.⁶⁵⁹ Able draws the conclusive statement that “the complex relations between architecture and human identity may be found in the process of cultural exchange.”⁶⁶⁰ Therefore, “the transformations of specific styles of architectural undergo in the process of dislocation and relocation reveal to us the inner core of stability and logic which enables us still to recognize a ‘family resemblance’ between the original style and the colonial style.”⁶⁶¹ Overall, he described this situation as “transformation of mind” and “dialogic conversation” that Mead’s ‘conversation of gestures’ and “objects have meanings, then they must enter into the human group consciousness much as the meanings we attach to our own behavior of other persons do.”⁶⁶² Mead may suggest the relationship of identity with that of others triggers awareness in social organism and community. This leads us to a further dimension that the awareness of identity is relevant to shifting mode of cultural transformation that triggers transformation of mind as Able explains.

On the process of shifting from modernism to postmodernism the awareness of architectural identity can be suggested through the relationship of identity and metaphor.

⁶⁵⁸ Abel, *Architecture & Identity: Responses to Cultural and Technical Change*, 141.

⁶⁵⁹ *Ibid.*, 144.

⁶⁶⁰ *Ibid.*, 149.

⁶⁶¹ *Ibid.*

⁶⁶² *Ibid.*

William Alexander McClung discusses modernist view.⁶⁶³ Regarding metaphor and its relationship to nature in architecture, McClung argued that although “assumptions about the right relationship of materials to structural function” is plausible to the dialectic system between architecture and nature, these assumptions are most fully articulated by “imaginative and ethical literature.” While “functionalist formula ... requires identity of contents with form of dweller with dwelling ... as a physical and metaphysical unity,” a metaphoric formula is realized ... only in imagination.” However, as devices ethical literature “permits the formulation of ideal structure in conformity with natural law” with the “dichotomy between the “natural” and “functional” structure and its contrary.”⁶⁶⁴ In “the Modernist Model” he found “modernist rhetoric” ethically pretended to “identity with nature” and that is “outside of share of choice” for legitimacy.⁶⁶⁵ Regarding organic architecture, “metaphor controls our mental picture in both house and tree” and “metaphor is powerful because of the unspoken assumption that the house is a metaphysical unity, a “body.” This unity is “one thing” and McClung called it “theoretical identity” which is a unity of forms and functions.⁶⁶⁶ Frank Lloyd Wright’s concept of organic architecture states “a building dignified as a tree in the midst of nature.”⁶⁶⁷ According to McClung, Le Corbusier and Wright share this “conception of architecture as organic or a body.”⁶⁶⁸ Oneness of identity, derived from dichotomy of architecture verses nature and nature verses function, is converged with autonomous theory of identity because of the metaphor defines metaphysical unity and architecture. This monadic ‘theoretical identity’ can be one of the characteristic of firmness of attributes of architectural identity.

As opposed to modernist dichotomy on the process and the ideological oneness in the end, postmodernist intends to find the solution in plurality and even in contradiction.

⁶⁶³ William Alexander McClung, "The Matter of Metaphor: Literary Myth of Construction," *The Journal of the Society of Architectural Historians* vol. 40, no. 4 (1981): 279-88.

⁶⁶⁴ *Ibid.*, 279.

⁶⁶⁵ *Ibid.*, 281.

⁶⁶⁶ *Ibid.*

⁶⁶⁷ Frank Lloyd Wright, *The Natural House* (New York, NY: Horizon, 1954). Cited in McClung, "The Matter of Metaphor: Literary Myth of Construction," 281.

⁶⁶⁸ "The Matter of Metaphor: Literary Myth of Construction," 281.

This requires uncertainty of image and complexity of metaphor. Therefore, mechanism of signification via metaphor is only possible with *intertext* and process. Barthes' theory of *intertextuality* influenced postmodern architecture. *Intertext* holds attributes of "fragments of other text" with a "chain of metaphors" like a *textuality* of semiology of city. Luis Martin describes Bernard Tschumi's "paradox of architecture," that architecture consisted of two interdependent but mutually exclusive terms: "conceived space" and "perceived space."⁶⁶⁹ To reconcile this fragment we need "the third term of architecture" which is "experience space" that has "a concept similar to Bataille's notion of a deep interior experience." Martin explains, "according to Tschumi architecture has both spaces which are paradox and opposition to resolved with this third term."⁶⁷⁰ This third term produces a controversial experience of "transgression" which violates classicism view of architectural law. Tschumi's notion of "transgression" works with his definition of "hedonism" represents "fireworks" that is a kind of non-architecture against classical stableness. This idea of fireworks is "pleasure of architecture," "labyrinth," and "an assemblage of fragments."⁶⁷¹ The required *chain of metaphors* is Tschumi's concern based on "the metaphorical relation established by Bataille between architecture and the philosophical texts provided by him with the elements to criticize rationality in architecture." Georges Bataille (1897-1962) influenced Tschumi's paradox and its solution that is annihilated experience in a sense. This solution is paradoxical with the reflection of pleasure of architecture. In this respect, Tschumi denounced modernism and developed instead postmodernism "linked to the discovery of pleasure and the deconstruction of language of architecture."⁶⁷² Like a notion of hermeneutic circle, semantics of architecture was "caught in an infinite chain of metaphors." In the end, remaining undefinable meaning creates architectural identity with the metaphorical mechanism of infinity and the inference of deconstruction that leads Derrida's

⁶⁶⁹ Louis Martin, "Transpositions: On the Intellectual Origin of Tschumi's Architectural Theory," *Assemblage* April, no. 11 (1990): 22-27.

⁶⁷⁰ *Ibid.*, 27.

⁶⁷¹ *Ibid.*, 26-29.

⁶⁷² *Ibid.*, 28.

“metaphysical dialectic of presence and absent.”⁶⁷³ Architectural identity is thus parallel to a chain of metaphors with an assemblage of fragmentation. This fragmentation exists as paradox between *conceived space* that complies with the notion of pyramid and *perceived space* that of labyrinth.

Similarly, Hide Heynen and André Loeckx approached architectural identity can be explainable relationships among metaphor, mimesis, and modernity.⁶⁷⁴ They describe the image of cultural identity from contradictory aspects of displacement by analyzing metaphor and the meaning of modernity. The experience of the shifting cultural situations such as migration, colonialism, urbanization, and globalization creates the critical condition change of our conceptual and perceptual realities of surroundings including architecture. Heynen and Loeckx’s explanation implies this shift can be a moment to generate new situation to recognize our identity. Many changing situations invoke the conflict and displacement. The displacement is relevant to metaphorical meaning and crates gaps including “semantic,” “semiotic,” and that of “praxeological.” However, possibly displacement becomes an origin that is “a condition: it generates a discursive chain of actions and counteractions by improvisation, intuitions, risk and creative leaps.”⁶⁷⁵ Heynen and Loeckx hypothesize “a condition of displacement necessitates that people rely on resources of creativity and imagination.”⁶⁷⁶ The conditions are, they explain contradictory, unstable, and unpredictable. The gaps of semantics comply with the “lack of meaning” that implies the level of legibility, while that of semiotic is “lack of signifier” that causes the incapability of “particular cultural meaning.” These two gaps create confusions or needs of recordation for the signification system, which is origin of signifier-signified relation. The last praxeological gaps are dealing with human behavior after having a displacement. These three gaps share a displacement as a condition. After shifting to a new situation, these gaps have to be

⁶⁷³ Ibid., 25.

⁶⁷⁴ Hilde Heynen and André Loeckx, "Scenes of Ambivalence: Concluding Remarks on Architectural Patterns of Displacement," *Journal of Architectural Education* 52, no. 2 (1998): 100-08.

⁶⁷⁵ Ibid., 101.

⁶⁷⁶ Ibid.

fulfilled with the updated conditions in order to be adaptable and meaningful in the new situation. Thus, this fulfillment will be satisfied with creativity and recodification of sign. That implies the recodification process is a part of adaptation process, and new signification “can be based on imitation, mimesis, or the revival of older or alien system.” This is also the process of displacement opening the new situation with the relation to one’s identity through metaphorical meaning. Metaphor is an imaginary transformer through mimesis and gap mediator of displacement. In architecture, Heynen and Loeckx describe the phenomenon of metaphorical meaning as not exclusively based on dramatic changing, but also it provides the opportunity of “metaphorical transfer” that can “occur in every day practices of building and dwelling.” This transformation through metaphor eventually creates “hybrid architecture—one that cannot be correctly classified into an identifiable category.” Heynen and Loeckx call this situation as “architectural ambivalence” that is “more than formal hybridization of the outside composition, that bears witness to the fundamental ambivalence of colonialism—an invented hybrid exterior acts as mediator between prestigious western presence in the interior and an absent,”⁶⁷⁷ Through metaphor the caused gaps in sematic, in semiotic, and in praxeology will be fulfilled. Architectural hybridization is the typical example that plays important roles in architecture along with the process of modernity.

The relation of Modernity and displacement was investigated along with the architectural modalities. Modalities are linked to the role of architecture to determine the process and meaning of displacement. Behind these modes, modernity is implementing its role continuously as a global process of emancipation. According to Heynen and Loeckx the role of architecture is three-fold: (1) *as receptacle*, (2) *as instrument*, and (3) *as staging of displacement*. Architecture *as receptacle*, it provides the role of a medium that “represents and manifest social and cultural changes.”⁶⁷⁸ This role requires architecture to provide the interpretation means of the social and cultural phenomenon. Heynen and Loeckx express the needs of “interpretation of traces of

⁶⁷⁷ Ibid., 103.

⁶⁷⁸ Ibid.

otherness”⁶⁷⁹ following Gaston Bachelard’s (1884-1962) “*Poetics and Space*.”⁶⁸⁰ Bachelard’s work appears that he was oscillating between the state of “prudence” and “the immediate dynamics of image.” He was seeking a “phenomenological determination of image.”⁶⁸¹ Poetic image is phenomenological and a being of meta-language in his psychoanalytical approach to his poetics of space. Bachelard described: “For a phenomenologist, the attempt to attribute antecedents to an image, when we are in the very existence of the image, is a sign of inveterate psychologism. On the contrary, let us take the poetic image in its being. For the poetic consciousness is so wholly absorbed by the image that appears on the language, above customary language; the language it speaks with the poetic image is so new that correlations between past and present can no longer be usefully considered.”⁶⁸² This represents his theory on poetic space in terms of the notion of oscillation that I am focusing for this research. Between prudent and dynamic characteristic of phenomenological image, an image of language becomes culture and meta-language. By changing cultural language, to understand new cultural meaning inevitably requires some interpretation to meta-language. For architecture with this mode, as receptacle reminds the notion of sign vehicle that Charles Morris’ semiotic theory. Sign vehicle conveys meaning especially in the form of dyadic language. Later in this chapter, I will discuss this mode in case of triadic language which is differently constructed in the Peircean mode. With respect to the relation to identity, this mode is likely to be relevant to the entities like interpretant and triadic identity. Possibly, this can be extended with association to “final interpretant.” I discussed the mode of interpretant including immediate, dynamic, and final interpretant in the previous Chapter (*Peircean Semeiotic and Semantic Logic*). With respect to architectural identity, this mode can represent the final stage of identity that architecture works *as receptacle* to formalize architectural meaning within specific manifestation of cultural change. Architecture becomes a mediator to construct cultural meaning.

⁶⁷⁹ Ibid.

⁶⁸⁰ Gaston Bachelard, *Poetics and Space: The Classic Look at How We Experience Intimate Places*, trans. Maria Jolas (Boston, MA: Beacon Press, 1994).

⁶⁸¹ Ibid., xviii.

⁶⁸² Ibid., xxix.

The second modality architecture *as instrument* “engages the built environment in a much more active role as the instigator of cultural change.” As a special tool architecture in this mode makes “regulation of behavior and disciplining the body.”⁶⁸³ This mode is a rule oriented rigorous implementation for inevitable shifting toward emancipation so that archetypical form can be forced to a contradiction in the process of cultural changing. Architecture can be a representation of power that guides the new stage of cultural phenomenon. The process of implementation of this instrument creates a conflict between old culture and that of new. Architecture is actually playing the role to change culture and influencing further cultural change in the long-term like “de-sinofication of the city”⁶⁸⁴ in Asia. This active mode creates a factual reality rather than metaphorical image and forcefully the process can be done. Architecture is means of the displacement, but the process of transformation is not simply made without involving dynamism of changing and a conflict between old conceptions and new perceptions. This mode is factual base, dynamism, and conflict. With respect to Peircean mode, it would involve “dynamic interpretant.” This factual mode complies with dyadic relation in this sense. Therefore, the mode of identity is dyadic resulting by the action and fact. I will explore later in this chapter.

The last mode, architecture *as staging displacement* can be a changing of changings. Heynen and Loeckx express “as creating a theatrical space of negotiation.”⁶⁸⁵ In this mode the patterns of changing exists in a pluralistic and simultaneous manner. However, the entities of this mode rely on singularity that in turn provides further changing from changings. Heynen and Loeckx describe this situation “can be seen as a collective staging of individual trial.”⁶⁸⁶ This collective individuality requires the “condition of displacement implies that patterns of behavior and value systems lose their self-

⁶⁸³ Heynen and Loeckx, "Scenes of Ambivalence: Concluding Remarks on Architectural Patterns of Displacement," 103.

⁶⁸⁴ Ibid., 104. The term “de-sinofication” is used to emancipate the power of influence from Chinese centered culture that is applied many countries for long period in Asia. This term may represent emancipation of modernity in Asia.

⁶⁸⁵ Ibid.

⁶⁸⁶ Ibid.

evidence,” then “it enhances modes of self-reflection and self-awareness.”⁶⁸⁷ There are two possibilities to understand this mode that include: (1) staging of displacement as end of displacement, or (2) that of new beginning. After losing self-evidence we have to invite new evidence that can be created through self-reflection and self-awareness. These three modes (*receptacle*, *instrument*, and *staging displacement*) shifting must be done as the moment of transition simultaneously at end and beginning. This transition mode creates the new steps where the steps consist of many entities that are in the mode of possibility to be end and beginning. However, this mode makes immediacy like theatrical improvisation that negotiates new meaning of transformed culture and new urban patterns. Therefore, in Peircean mode the suitable modes can be complied with “immediate interpretant” that takes immediate possibility. Thus, relevant identity can be monadic mode of singularities. Singularities can form new possible patterns of a staging displacement.

The relationship between modernity and displacement guides the patterns of role of architecture as described in the above three modes of architectural role. Inevitably tight relationship between them should be recognized in order to seek further knowledge for the specification of identity in architecture. The condition of displacement, Heynen and Loeckx explains, “can be seen as an acute and radicalized version of something that is inherent to modernity in a more general sense.”⁶⁸⁸ Characteristics of modernity itself hold some of the same aspects of displacement. Although, the implication of modernity connects displacement attributes such “a conflict with tradition caused by a conscious pursuit of the new, a continuous straggle for change,”⁶⁸⁹ Heynen and Loeckx describe two dimensions of modernity: modernity *as a programmatic concept*, and modernity *as transitory*. These two are contradictory and ambiguous according to Heynen and Loeckx. They are the source of three modes of architecture’s attributes described above. The first aspect of modernity represents “a programmatic concept” that is “a project of progress

⁶⁸⁷ Ibid.

⁶⁸⁸ Ibid., 105.

⁶⁸⁹ Ibid.

and emancipation.”⁶⁹⁰ This aspect manifested colonialism for example. This displacement process is a harsh experience and coercive way of modernity that on the one side it emancipates local tradition and on the other it enforces new rule of culture. Heynen and Loeckx describe this manifestation of displacement “as one-way replacement and abolition, not as metaphoric interaction.” In this aspect, modernity provides brutal enforcement of a new system while emancipating the old system of culture. Many contradiction between these systems can be observed, such as in the process of gentrification in the urban system. It is negative aspect of one-way implementation by authority. In other words, the goal of this modernity is already programmed. For the dimension of architectural identity related to this modernity, it will be single belief mode, static and monadic identity similar to ‘theoretical identity described’ explained by McClung. This side of modernity is therefore pertaining to rationality that the coding system is readily available and stable. Even if this side of modernity shows predictable meaning with coding system, we would have unexpected result regardless good and bad. In this side of mode, only we would not have enough flexibility for this kind of displacement.

The second aspect is “the transitory view stresses its transient or momentary aspects” that is “the fugitive, the contingent, the half of art, of which the other half is the eternal and the immutable” following Baudrillard’s concept of modernity.⁶⁹¹ This aspect of modernity is complement of a programmatic concept in order to face unexpected transit of transformation. Old codification will be replaced with newly adapted codification with new architectural identity. This is not stable and conflicting for the shift toward new staging of displacement. Martin described similar conflict following Tschumi’s notion of architectural paradox. There are two components in architecture: *Pyramid* which makes reason, and *Labyrinth* which is a deep experience of space. By having both components, architectural paradox makes a sense of totality. In terms of modernity, Heynen and Loeckx describe the possible argument that “the most interesting and

⁶⁹⁰ Ibid.

⁶⁹¹ Ibid.

contradictory aspect of modernity can be found in the margins of transitoriness left open by the programmatic process of codification.”⁶⁹² The moment of transit is not permanent rather ephemeral phenomenon that requires sensible and intensive *experience*. The process of codification with the *experience* will be challengeable for programmatic concept. Displacement provokes negotiation of new pattern and arrangement for the possible and suitable codification based on perceived results. The transit is deeply related to the gaps between conception and perception, and between rationalism and romanticism. Although Tschumi approaches from a postmodernism view, the process of modernity inheres in this double components (reason and pleasure) and contradiction. This situation recalls cultural identity in general so that the position of identity of architecture will be contextualized more specifically. In Peircean mode the specification of identity is three-fold: monadic, dyadic, and triadic with respect to the notion of hypostatic abstraction that holds the condition with the set of these three kinds of identity. Next, I will project cultural identity on Peircean mode.

The specification of cultural identity complies with scope and process. Identity with self and that of society may have different scopes in terms of scale and relevancy. These multiple and different layers consist of cultural identity. Cultural identity is not a stable fact; it is rather processes that take different stages and aspects along with scopes. Cultural identity consists of shared elements and meaningfulness for the collective “self” in order to be accepted in a society. Heynen and Loeckx approaches scope and process from psychoanalysis at the stage of *self-identity* through the stage at ambivalent of *multiple interpretation* of identity. Each stage of identity was analyzed by them as twofold structure. I will interpret these as three-fold along with Peircean mode. Specifically this interpretation is a sketch toward the satisfactory condition of hypostatic abstraction process with three kinds of identity set: monadic term with dyadic and triadic identities.

⁶⁹² Ibid., 106.

Self-identity, according to Heynen and Loeckx, is shown as “the result of certain displacement” following Jacques Lacan.⁶⁹³ Lacan’s notion, “mirror stage” has displacement with twofold structure. The first displacement occurs between “‘identification of’ message” and “‘identification with’ acceptance.”⁶⁹⁴ They explain this process involves “the mimetic appropriation produces a certain shift, selection, recombination, [and] interpretation.”⁶⁹⁵ The second displacement provides unmet situation of mirror that causes “dissatisfaction that stimulates a displacement of the search for identity to ever-other mirror image.”⁶⁹⁶ The first architectural identity can be situated as immediate acceptance, which is monadic mode, while second is conditional and conflicting; therefore it is dyadic mode with “subsequent displacement from elements that come from outside and that are mimetically appropriated.”⁶⁹⁷ Thus, self-identity has two-fold in terms of both structure and process. Social structure is not simply a summation or commonality of individuality. This structure is formed by the collective self with each self-identity. Certainly, ‘self’ has two distinctive phases, if we follow Mead. Identity of architecture as the relationship between self and environment, requires organized self-conscious in society. “The ‘self’ is essentially a social process going on with two distinguished phases”⁶⁹⁸: Self as constant present and self as reflective. Self-identity as constant present is monadic; self-identity as reflective is dyadic. Therefore, collective self-identity would have the possibility to be transformed to a cultural identity. This requires the process of making transformation. Thus cultural identity is not only the fact rather it is a progressing process with collective identity, which can be triadic. In Peircean mode, this triadic mode identity is called teridentity in Peircean Algebraic Logic (PAL) as I described in the previous chapter (Chapter VI – *Peircean Semeiotic and Semantic Logic*). This is a special case in the triadic mode that requires complete equivalency of triadic relations, which can be a critical component for

⁶⁹³ Ibid.

⁶⁹⁴ Ibid.

⁶⁹⁵ Ibid.

⁶⁹⁶ Ibid.

⁶⁹⁷ Ibid.

⁶⁹⁸ Mead, "The "I" and the "Me", " 591.

Peircean reduction (hypostatic abstraction). Instead cultural identity may be inheriting a more controversial process of reforming culture with displacement. This contradiction is not towards chaos rather, Heynen and Loeckx discuss, it may stay as ambivalent.⁶⁹⁹ When the condition of hypostatic abstraction is met with teridentity, the cultural identity will be a powerful presentation. In the form of architecture, this special incidence could be guided through meaning of architecture as the result of hypostatic abstraction. The possibility of this situation may be approachable from the ordinal sense of cultural identity based on diversified collective self-identity.

The controversial collective self-identity as cultural identity takes a form of mitigation through ambivalence. Cultural identity is controversial because of the process of displacement. Nevertheless, this gap can be ameliorated through the effect of metaphorical transfer that takes “mimetic identity formation ... in displacing contradiction into ambivalence.”⁷⁰⁰ Heynen and Loeckx extended their idea from mimetic displacement that is originally those of self-identity development by changing the scope to society level from that of children’s development psychoanalytic stage. Following Horkheimer and Adorno’s Frankfurt School’s dialectic rational behavior, Heynen and Loeckx explains “the conception of culture is contradictory throughout because it links the idea of self-realization with aspects of domination and oppression.”⁷⁰¹ This contradiction must be mitigated with the process of mimetic displacement. The three modes of architecture, including architecture as receptacle, architecture as instrument, and architecture as staging displacement, contributes to this mitigation process. The idea of displacement is the original recourse to recognize identity and the mimetic displacement triggers the condition to be ambivalent. This process holds architectural identity to be changing with the form of oscillation.

⁶⁹⁹ Heynen and Loeckx, "Scenes of Ambivalence: Concluding Remarks on Architectural Patterns of Displacement," 106-07.

⁷⁰⁰ Ibid., 107.

⁷⁰¹ Ibid.

VII.6 Three Modes of Architectural Identity

With respect to the notion of hypostatic abstraction, adicity includes monadic term, dyadic and triadic identities. Regarding various aspects of identity, the identities I discussed above can comply with three categories of identity of this notion and PAL, or the possibility of their compliance. Especially, triadic identity (teridentity) is the most undeterminable but possible. Monadic term can be converted in the realm of architectural identity. Monadic identity is similar to that of McClung who insisted identity to be unity. He called this architectural identity as ‘theoretical identity.’ This requires a modernist view of metaphor. Dyadic architectural identity is controversial and conflicting between conception and perception, between rational and emotional (romantic). Luis Martin brought this aspect of identity through Bernard Tschumi. The contradiction and disjunction between Pyramid (reason) and Labyrinth (pleasure) need to be solved through deep *experience*. This notion of experience is desired as *third*, Bataille’s notion of ‘a deep interior experience’ to solve the disjunction. Tschumi’s metaphorical chain is the mode of dyadic. Lastly triadic adicity of identity is approachable through mimetic displacement to ambivalence described by Heynen and Loeckx. Their notion of cultural identity is similar to Chris Able’s definition of architectural identity as cultural-form. He positions architectural identity parallel to architectural space and architectural language. The relation between identity and space, space and language, and language and identity creates possible triadic relations. Human identity, Able concludes to “be found in the process of cultural exchange.”⁷⁰² Displacement described by Heynen and Loeckx as the source of architectural identity is similar to this human identity.

VII.7 Experience of Oscillation in Architecture

The dimension of identity is transitory that takes form of oscillation. In the next two sections, I will discuss theories, which are relevant to the process of oscillation and shifting the perception of architectural reality. The idea of oscillation is a fundamental or

⁷⁰² Abel, *Architecture & Identity: Responses to Cultural and Technical Change*, 144.

necessary condition while the availability of three different kinds of identity is a satisfactory condition for the process of hypostatic abstraction. The notion of survival aesthetics and hedonic adaptation represent this condition and explain the mechanism of oscillation. The dimension of oscillation is not necessary to occur within one direction. It is a more multidirectional phenomenon. I discussed earlier this point in the case of linguistics, Saussurean distinct two dimensions, diachronic and synchronic. The reality of oscillation is not limited to one of two dimensions. It is multiple dimensions with shifting processes. I intend this aspect in the following sections. In later of this chapter, I will further discuss how oscillation relates with the architectural formal system along with Peircean notion, *interpretant*, and this architectural formal system represented by the notion of *tripartition*. The essential understanding in the substance of oscillation is a key and a necessary condition for an architectural formal system to be interpreted by Peircean semeiotic.

Recent cognitive psychology suggests the interplay of oscillation that complies with the process of adaptation. It explains our mind accepts our surroundings by adapting the changing circumstance through mind-body interplay. The conceptual and perceptual cognition contributes to the establishment of our mental sequence while our sequential experience will be embodied as unified singularity. These steps are not orderly made rather random and in an ad hoc manner. In the case of hermeneutics this phenomenon was explained by Paul Ricoeur as *new time* concept and narrative experience. Also the notion of simulacrum such as by Jean Baudrillard shows similar experience. Metaphorical and mimetic components of created new order, with reference or without reference, can be applied for the new result of mental interplay. The reality of our mind accepts our surroundings by adapting the changing circumstances through mind-body interplay according to the recent study of cognitive psychology and neuroscience.⁷⁰³ The relation between such as emotion and intellectual cognitive system are intricate and mutual association but they are not separate entities in our brain activity. They work together in our existence, which consists in mind and body. The notion of adaptation was

⁷⁰³ Jay Schulkin, *Bodily Sensibility: Intelligent Action* (Cary, NC: Oxford University Press, 2004).

focused on as the problem solution of our behavior has connection to Pragmatist approach.⁷⁰⁴ According to Jay Schulkin “problem solving is always adaptive”⁷⁰⁵ and “adaptive system ... connects us to the world.”⁷⁰⁶ Our brain is “oriented toward detecting discrepancy, noticing uncertainty, and capturing stability.” The response of cognitive behavioral adaptation is underpinned in the bases between unfamiliarity and stability in order to find the cohesive solution to avoid the uncertainty and the distraction of order. An aesthetic experience is a process of organism and can be a daily experience, which was explained by John Dewey.⁷⁰⁷ In addition, this experience constitutes aesthetically profound causality with cognitive behavioral adaptation. In the case of architecture we must experience a work of architecture without separation from the reality of our daily experience. Our built environment surely establishes the concrete relationship between our mind and architectural objects, which creates the certain quality of an experience. The exclusion of aesthetic experience from daily experience in many of the fine art must be true. Nevertheless, we must admit that more or less in the case of architecture, daily perceivers cannot avoid the affect from works of architecture. This perception cumulates the series of experiences, which make a sequence. The sequence of experiences creates a singularity of experience that represents a quality. Dewey called this *singularity* as the existence constitutes single unity.⁷⁰⁸ However, this *singularity* has multiple dimensions like Gilles Deleuze’s notion of repetition in *Difference and Repetition*.⁷⁰⁹

VII.7.1 Survival Aesthetics

I will now discuss this multiple dimensional oscillation in the notion of survival aesthetic theory by Grant Hildebrand and hedonic adaptation theory by Daniel Kahneman. We experience oscillation as organic phenomenon in survival experience and hedonic

⁷⁰⁴ *Cognitive Adaptation: A Pragmatist Perspective* (New York, NY: Cambridge University Press, 2009).

⁷⁰⁵ *Ibid.*, 29.

⁷⁰⁶ *Ibid.*, 30.

⁷⁰⁷ John Dewey, *Art as Experience* (New York, NY: Penguin Group Inc., 2005 (1934)).

⁷⁰⁸ *Ibid.*, 38.

⁷⁰⁹ Deleuze, *Difference & Repetition*.

adaptation will provide mechanical reasoning support. Therefore, both approaches are inevitably forming a complement relationship. The relationship between primordial sense and architecture was presented by Grant Hildebrand in *Origin of Architectural Pleasure*.⁷¹⁰ Regarding the perception of architecture Hildebrand explored the notion of survival aesthetics. The core concept of this notion suggests the shifting process between *prospect* and *refuge* following Jay Appleton (born 1919). Appleton theorized *prospect-refuge* for aesthetic experience in *The Experience of Landscape*.⁷¹¹ The interchangeable mode of prospect-refuge helps to understand the oscillation interpreted by Peircean shifting process of three stages of *Interpretant* (immediate interpretant, dynamic interpretant, and final interpretant). These three distinctive but associative *interpretants* are discussed in the previous chapter (*Peircean Semeiotic and Semantic Logic*). This process creates a *hierarchical interaction* of sign process that involves thirdness characteristics and the mental interaction of semantic interpretation following ‘*hypostatic abstraction*.’ The characteristics of postmodern architecture associated with *the concept of shift* will be described in the theoretical base regarding the above examples.

Before moving into the discussion of survival aesthetic experience an understanding of the general background, regarding aesthetics in architecture⁷¹² through contemporary aesthetic expertise will be helpful in order to ground the theory. The general concept and characteristics of aesthetic experience associated with complexity, unity, and intensity was provided as an aspect of human perception by Monroe Beardsley (1915-1985) in philosophy, Rudolf Arnheim (1904-2007) in Gestalt psychology, and others.⁷¹³ With respect to the pedestrian experience in urban environment Raymond Isaacs explains

⁷¹⁰ Hildebrand, *Origin of Architectural Pleasure*.

⁷¹¹ Appleton, *The Experience of Landscape*.

⁷¹² In architecture and urban planning, the City Beautiful Movement is influential for aesthetic consideration in the recent theory in the late 19th century and the early 20th century in the United States. For example, *plan of Chicago* (1909) was matured City Beautiful Movement based on Burnham’s plan. See, William H. Wilson, "The Glory, Destruction, and Meaning of the City Beautiful Movement," in *Reading in Planning Theory*, ed. Scott Campbell and Susan Fainstein (Malden, MA: Blackwell Publishers, 1966), 67-102.

⁷¹³ Raymond Isaacs, "The Urban Picturesque: An Aesthetic Experience of Urban Pedestrian Place," *Journal of Urban Design* vol. 5, no. 2 (2000): 145-80.

Beardsley's aesthetic experience has the characteristics of "aesthetic experiences vary in degree in the dimensions of unity, complexity, and intensity. Intensity and unity may be more engaging for shorter durations, while complexity may elicit affective response over a longer time-period."⁷¹⁴ Without perception, there can be no experience and because of experience, we have perception. Moreover, the main questions are quality of perception, validity of perception, and what kind of perceptual experience. The main role of aesthetic experience for Beardsley is directly relevant to the perception and the level of complexity. In his theory, the level of complexity and that of sensation are correlated. According to Michael Wreen, Beardsley weighted on the criticism of art and approached it with three aspects of critical statements on aesthetics including *descriptive*, *interpretive*, and *evaluative*.⁷¹⁵ Wreen states "descriptive statements give rise to involve the concept of form," while "interpretative statements ... concern the 'meaning' of a work of art, with 'meaning' here referring to a semantic relation ... between the work [of art] and something outside it." Lastly, "critical evaluations are normative judgments that basically say that a work of art is good or bad, or how good or bad it is." In Beardsley's ontology of aesthetic, he defined "aesthetic objects are a subset of perceptual object."⁷¹⁶ Therefore, Beardsley's critique concerned perception as a main source in terms of form creation, meaning interpretation, and value judgment, and his principal notion was "the 'aesthetic experience' as the direct response on the part of the perceiver to the thing being perceived."⁷¹⁷

For Rudolf Arnheim in Gestalt psychology aesthetic experience was focused on the mind mechanism that "seeks order" and the reorganization of it in "objects and space."⁷¹⁸ Even some of the missing or hidden part will be filled by our mind, which

⁷¹⁴ Ibid., 146.

⁷¹⁵ Michael Wreen, "Beardsley's Aesthetics," in *The Stanford Encyclopedia of Philosophy*, ed. Edward N Zalta (Fall 2010 Edition). Accessed March 17, 2013, <http://plato.stanford.edu/archives/fall2010/entries/beardsley-aesthetics/>.

⁷¹⁶ Ibid.

⁷¹⁷ Isaacs, "The Urban Picturesque: An Aesthetic Experience of Urban Pedestrian Place," 146.

⁷¹⁸ Ibid.

follows “the principles of order to the objects of space.”⁷¹⁹ Raymond Isaacs summarized Arnheim principles as: “aesthetic is a balance of order and confusion,” “attempts to identify by category the qualities of visual art,” and “introduces time and motion to the aesthetic experience of architecture.”⁷²⁰ Unit of time with duration of motion can be recognized as a unit of experience and “a unified image in space.”⁷²¹ Therefore, rhythm and units of “experience of spatial environment”⁷²² becomes the essence of aesthetic experience in architecture. Experienced unified images must be sorted and permuted in order to be coherent enough with some order of perceiver’s capacity. His notion of “sense of order” is recognized by perceivers’ sequential experiences of multiple images, actions, and feeling. These are multiple memories in terms of the relationship between user and objects of architecture. Architectural experiences are sequential with multiple level memories at a time.

With the relation to the survival theory, the notion of *prospect-refuge* was adapted by Hildebrand following Appleton’s landscape architecture theory. Appleton’s prospect-refuge theory includes curiosity-arousal theory by Daniel E. Berlyne (1924-1976) and based on “human behavior directed toward primitive survival.”⁷²³ The idea of refuge and prospect characterizes opposition; however, it is a mutual relationship. Hildebrand explains that “refuge is small and dark; prospect is expansive and bright.” In addition, “they can occur contiguously, however, and must, because we need them both and we need them together.”⁷²⁴ According to Hildebrand and Isaacs the original concept of refuge and prospect was the form of hunting activity. “Hunters need to see in order to exploit their territory and to hide in order to perform other functions, like eating and rearing children.”⁷²⁵ This “settings [are] offering places from which to see-prospects-along with places in which to hide, ... [while] defended-refuges-offer safe vantage

⁷¹⁹ Ibid.

⁷²⁰ Ibid., 147.

⁷²¹ Ibid.

⁷²² Ibid.

⁷²³ Ibid.

⁷²⁴ Hildebrand, *Origin of Architectural Pleasure*, 22.

⁷²⁵ Isaacs, "The Urban Picturesque: An Aesthetic Experience of Urban Pedestrian Place," 147.

points for survival purposes.”⁷²⁶ Therefore, refuge becomes “nesting space.”⁷²⁷ The fundamental reciprocal relationship between refuge and prospect is described by Hildebrand: “from the refuge we must be able to survey the prospect; from the prospect we must be able to retreat to the refuge.”⁷²⁸ These notions of prospect-refuge imply that architectural aesthetic experience constitutes contiguous and mutual process as a sequence to shift between refuge and prospect. When the experience is perceived as refuge, a perceiver has the feeling of safe-habitation. This mind status is stable and calm. Instead, when it turns to prospect, the opposite mind occurs such as curiosity, uncertainty, and expectation. These feeling can be described as a preparation of a mind shifting for an adaptation, which anticipates and requires new coherent situation as the psychological result of problem solution.

The variety of aesthetic experiences can be explained in other forms and different aspects of feeling. In an extension of the notion of prospect-refuge interplay, Hildebrand explains this interplay interprets complex process for the survival strategy of human. Even if the notion of refuge means calmness and safeness perception, the survival strategy requires controversial conditions in order to realize aesthetic experience following Jay Appleton.⁷²⁹ Appleton explained in *The Experience of Landscape* the relation of prospect-refuge as it relates to survival and movement. “If the eye makes a spontaneous assessment of the environment as a strategic theatre for survival, this must include some assessment of the opportunity for movement between the various key-positions in the prospect-refuge complex.”⁷³⁰ In order to survive our sense towards environment has to be spontaneous. The turning point to prospect leads curiosity and uncertain as oppose to refuge. Furthermore, the mind status of refuge can be emphasized by stressing the opposite situation such as feeling of danger. To explain this controversial feeling that danger enhances the level of pleasure, Hildebrand uses the idea

⁷²⁶ Ibid., 148

⁷²⁷ Hildebrand, *Origin of Architectural Pleasure*, 21.

⁷²⁸ Ibid., 22.

⁷²⁹ Ibid., 34.

⁷³⁰ Appleton, *The Experience of Landscape*, 103 note 9. Cited in Hildebrand, *Origin of Architectural Pleasure*, 34.

of “peril” and the permutation of “enticement of prospect-refuge.”⁷³¹ This mechanism will be explained in the next section along with hedonic adaptation of hedonic psychology. In hedonic adaptation, shifting a baseline from one situation to another creates the changing the value of stimuli in terms of human perception. I will explain the idea of baseline shifting of hedonic adaptation that supports subjective value increment controversially when shift is caused toward opposite direction as survival system of our behavior. The prospecting feeling of danger such as seeing a skyscraper increases the value of refuge perception. This feeling causes enticement, which is similar to *prospect-refuge interplay* and produces aesthetic desire towards the feeling of “peril.” Hildebrand further explains the possibility of “permutation of enticement experience”⁷³² which “changes the response from enticement to anxiety.”⁷³³ The complexity of prospect-refuge interplay is similar to the controversial mixed feeling of pleasure and pain, and easiness and danger. According to Hildebrand, the prospect-refuge relations are hierarchical to enrich architecture between exterior and interior. For example, the exterior image of a building promises to holds interior refuge, and from interior perceiver prospect outside environment. He calls this reciprocal situation of prospect-refuge interplay between inside and outside “nested hierarchy of refuge and prospect.”⁷³⁴ Perhaps, this experience is relevant to the enticement of prospect-refuge and its complexity. Peircean dynamic interpretant takes relations to a prospect-refuge. In the Secondness mode, this involvement is a part of psychology. In addition, hedonic adaptation’s dyadic identity is related. Regarding the connection between prospect-refuge and hedonic adaptation, the notion of quality scales by Rudolf Arnheim becomes the bridge.⁷³⁵ His idea that symmetry of architecture is “a special case of the scale

⁷³¹ *Origin of Architectural Pleasure*, 68.

⁷³² *Ibid.*, 64.

⁷³³ *Ibid.*, 67.

⁷³⁴ *Ibid.*, 33.

⁷³⁵ Rudolf Arnheim, "The Dimension of Disagreement," *Journal of Aesthetics & Art Criticism* vol. 28, no. 1 (1979): 15-20.

leading from simplicity to complexity”⁷³⁶ as “complexity scale” is focused to describe “a perceptual profile of the building.”⁷³⁷

Essentially the phenomenon of aesthetic experience is nondiscursive⁷³⁸ and spontaneous. Susanne K. Langer explained, feeling can be projected and becomes presentation in art form.⁷³⁹ Charles Sanders Peirce thought feeling is of mode of possibility and monadic. In aesthetic experience, the role of feeling is “perceptual apparatus.”⁷⁴⁰ To deal with aesthetic experience, this muting and timeless mode has to be analyzed. To *project* and *present* our feeling we must have our starting point even if this action is ephemeral. For aesthetic experience, *presentation* can be possible based on the starting point, the point to make an *aesthetic judgment*. According to Hannah Ginsborg,⁷⁴¹ Kant described *judgment of beauty* with four moments in the section of *Critique of Aesthetic Judgment* (his third critique), *Critique of Judgment*.⁷⁴² The four key aspects of his treatise are: (1) “judgment of beauty are based on feeling, in particular feelings of pleasure;” (2) “judgment of beauty have, or make a claim to, ‘universality’ or ‘universal validity;’ ” (3) “judgment of beautiful do not presupposed an end or purpose;” and (4) “judgment of beauty involve reference to the idea of necessity.”⁷⁴³ Ginsborg explains these four moments can be summarized in the following. Kant differentiated judgment of beauty from the “objective sensation.” Although judgment beauty concerns object and to be sought as universal judgment of the perception of object, the validity of judgment of beauty is not based on “the concept of beauty” and “beauty is not the concept of the object.” Kant’s notion of “purposiveness” regarded “formal purposiveness” but not presupposed purpose. The idea of necessity is about a sharing pleasure of beauty, which

⁷³⁶ Ibid., 16.

⁷³⁷ Ibid., 17.

⁷³⁸ Ockman, *The Pragmatist Imagination*, 119.

⁷³⁹ Langer, *Mind: An Essay on Human Feeling*, 1, 73-77.

⁷⁴⁰ Schulkin, *Bodily Sensibility: Intelligent Action*, 59.

⁷⁴¹ Hannah Ginsborg, "Kant's Aesthetics and Teleology," in *The Stanford Encyclopedia of Philosophy* ed. Edward N Zalta (Spring 2013 Edition). Accessed April 15, 2013, <http://plato.stanford.edu/archives/spr2013/entries/kant-aesthetics/>.

⁷⁴² Immanuel Kant, *Critique of Judgment*, trans. James Creed Meredith (New York, NY: Oxford University Press, 2007).

⁷⁴³ Ginsborg, "Kant's Aesthetics and Teleology."

is “defined as a subjective principle which allows us to judge by feeling rather than concept. Rationalism refers to concept while feeling is that of romanticism in some respect. Kant’s aesthetic judgment represents judgment of beauty and the notion of *judgment of taste*. Nicholas Walker wrote in the introduction of *Critique of Judgment*, that “Kant had ... repeatedly touched upon the status of the aesthetic perception of ‘the beautiful’ as a fundamental question for the theory or ‘critique’ of taste.”⁷⁴⁴ This aesthetic perception belongs to subjective but also universal idea that is ephemeral and requires “indeterminate concept.”⁷⁴⁵

To analyze this nondiscursive and an ephemeral perceptual apparatus, I am focusing on the moment of feeling caused by two immediate sensibilities which includes immediate past experience and immediate future. Immediate past is relevant to aesthetic judgment, and that of immediate future is aesthetic application. These concepts can be analogical to prospect-refuge and form-feeling relations. Aesthetic judgment “reflects our cognitive flexibility,” and constitutes “consummatory behaviors” resulted by a learning process. This behavior develops prediction of event for a cognitive component and “rule governed expectation.”⁷⁴⁶ Aesthetic judgment aims “the information-processing ... orienting to novelty, familiarity, and syntax.”⁷⁴⁷ Aesthetic judgment characterizes the result of adaptation by learning which reflects novelty, rule-governed syntax consummation. The main idea of aesthetic judgment is that the judgment is acting as the ruled baseline for aesthetic appreciation, which detects discrepancy such as novelty of artwork. Jay Schulkin explains: “the mechanisms for aesthetic appreciation utilize preexisting neural and behavioral systems in the organization of behavior.”⁷⁴⁸ While aesthetic judgment is a baseline of behavior, aesthetic appreciation prospects aesthetic pleasure, which seeks coherent problem solution of aesthetic experience. Indeed

⁷⁴⁴ Kant, *Critique of Judgment*, ix.

⁷⁴⁵ *Ibid.*, 167.

⁷⁴⁶ Schulkin, *Bodily Sensibility: Intelligent Action*, 73.

⁷⁴⁷ *Ibid.*, 76.

⁷⁴⁸ *Ibid.*, 77.

“aesthetic experiences are pervasive, tied in part to problem solving”⁷⁴⁹ in order to make sense for human perception via feeling, *perceptual apparatus*. This process is similar to hedonic adaptation and the complexity of prospect-refuge interplay. The image of aesthetic experience of architecture is in the “combination of complexity and order, prospect and refuge.”⁷⁵⁰ Beardsley’s three areas of statements regarding criticism of aesthetic were concerned with descriptive, interpretive, and evaluative. Aesthetic judgment is chiefly relevant to the last area of statements.

While Kant’s notion “*beauty*” is positive pleasure, the notion of “*sublime*” is relevant to that of negative and more related to the inner mind pleasure as opposed to outer formal appearance. The complexity of aesthetic judgment requires these positive and negative admixtures of aesthetic experiences. We need to recall Adorno’s notion of *negative dialectics* in order to understand the relation to architectural pleasure and its complexity. This form of pleasure is typically realized by deconstructivist architecture, which follows Derrida’s philosophy. The idea of negative pleasure can be approximated as an idea of *desire* which is “transcendental signified” if we follow Derrida. To feel desire we are constantly shifting our baseline and making adaptation. This process is not fixed dyadic and sequential hierarchy showed as examples of Saussurean based “semiotic” (Umberto Eco and his followers). Shifting baseline and adaptation is a rather simultaneous triadic process that can be perceived as non-discursive aesthetic experience. In Chapter IV – *Postmodern Philosophy* we saw Derrida’s logocentrism is a transition of shifting modes between monadic and dyadic. Along with the interpretation of Peircean semeiotic, non-discursive aesthetic experience is relevant to *immediate interpretant* that is categorized as monadic mode interpretant. I will compare this mode with monadic architectural identity related to the Peircean notion of hypostatic abstraction in PAL. I must discuss the essence of shifting as related to baseline in the following section. I will analyze hedonic adaptation theory towards hypostatic abstraction.

⁷⁴⁹ Ibid.

⁷⁵⁰ Hildebrand, *Origin of Architectural Pleasure*, 101.

VII.7.2 Pleasant and Unpleasant (Hedonic Adaptation Process)

Daniel Kahneman (born 1934) and Amos Tversky developed *prospect theory*.⁷⁵¹ Kahneman is also associated with the development of *hedonic psychology*. In prospect theory, they concerned with the accurate description of decision-making behavior associated economy. In hedonic psychology Kahneman researched a wide scope of human feeling and value regarding pleasant and unpleasant. This scope includes neuroscience through social behavior of human. I focus on one of the theory that studies human adaptation process toward surroundings which is called *Hedonic Adaptation*.⁷⁵² The relationship between survival and adaption was explained in psychology and neuroscience in a former section, “*Survival Aesthetics*.” In this section I will further develop the discussions regarding the adaptation mechanisms of aesthetic experience, aesthetic judgment, and shifting process of human perception in order to finding a *problem solution* along with hedonic psychology and hedonic adaptation. According to Kahneman, “hedonic psychology ... is the study of what makes experiences and life pleasant or unpleasant.”⁷⁵³ The range of hedonic psychology study is varies from neural science to the quality of life in cultural and social context. The possibility of adaptation processes are concerned with “important commonalities ... at different levels”⁷⁵⁴ of these ranges in hedonic psychology. The effect of adaptation in human perception is the focus because “adaptation ... can strongly influence pleasure and *unpleasurable* feelings.”⁷⁵⁵ The theory of hedonic adaptation explains the intensity of hedonic stimuli which increases and decreases its value in the process of adaptation. I interpret the similarity of this mechanism to that of *prospect-refuge interplay* in order to establish a pattern that explains the basic concepts of perceptual aesthetic experience which is equivalent to the basis of Peirce’s hypostatic abstraction process. The result of adaptation can produce a perceptual coherence in terms of aesthetic feeling. The

⁷⁵¹ Daniel Kahneman and Amos Tversky, "Prospect Theory: An Analysis of Decision under Risk," *Econometrica* XLVII(1979): 263-91.

⁷⁵² Frederick, "Hedonic Adaptation," 302-29.

⁷⁵³ Kahneman, Diener, and Schwarz, *Well Being: The Foundation of Hedonic Psychology*, ix.

⁷⁵⁴ *Ibid.*, xi.

⁷⁵⁵ *Ibid.*, xii.

mechanism of this process can be explained to develop an aesthetic experience in architecture because human perceptual adaptation takes place in an environment something like prospect-refuge interplay discussed in the previous section.

The definition of hedonic adaptation is “a reduction in the affective intensity of favorable and unfavorable circumstances.”⁷⁵⁶ In general adaptation is “any action, process, or mechanism that “reduces the effect ... of a constant or repeated stimulus” and “can occur at several different levels – from overt behaviors ... to molecular...”⁷⁵⁷ Thus, adaptation involves learning processes to fit a new situation and this process requires a certain length of duration. Hedonic adaptation is dealing with the “adaptation to stimuli that are affectively relevant.”⁷⁵⁸ Interestingly it is concerned with the process at the cognitive level because “many hedonic stimuli are cognitive rather than sensory,” and “many of the processes involved in hedonic adaptation involve cognitive changes.”⁷⁵⁹ The implication is that hedonic stimuli can be more oriented toward social context rather than just a matter of sensory issues. In short, hedonic adaptation is a cognitive process which controls an affective feeling in a certain way by changing the situation between, before, and after an adaptation. The situations of *before* and *after* can be established as two baselines. Regarding notions of aesthetic judgment, I discussed the relations to cognitive process. Aesthetic judgment is the result of learning activities by establishing a baseline made by rule-governed syntax consummation. Aesthetic judgment is characterized as the ruled baseline that is obtained by learning and aiming to implement an aesthetic appreciation. Therefore, hedonic adaptations’ two baselines can be similar to the bases of aesthetic judgment. There is a possibility to find the commonalities between hedonic adaptation and aesthetic judgment. These baselines dynamically provide the duration of a psychological satisfaction, which is a problem solution, by the continuous shifting between many levels of aesthetic judgment, evaluation, consummation, and appreciation.

⁷⁵⁶ Frederick, "Hedonic Adaptation.", 302.

⁷⁵⁷ Ibid.

⁷⁵⁸ Ibid.

⁷⁵⁹ Ibid.

The fundamental functionality of hedonic adaptation works as a survival system of organism while it generates the enhancement of stimulation value, which is affectively relevant. This process is explained by two major functions of hedonic adaptation: (1) the protection of organism by reducing the internal impact of external stimuli, and (2) the enhancement of perception by heightening the signal value of changes from the baseline.⁷⁶⁰ Regarding the protection of organism, this mechanism can be summarized as psychologically hedonic states to provide the necessary attention of prioritized affective need, but harmful influences need to be reduced to protect organism. In this case the intensity of stimuli will be desensitized. Within a circumstance when a local perspective is changed, the adaptation is triggered by shifting a baseline. To shift baseline is to shift an adaptation level. An adaptation level can be a benchmark to measure the stimuli of hedonic intensity at the actual circumstance and the prospecting circumstance. In this mechanism when an adaptation level shifts, the difference of utility value (stimulus value) between present circumstance and that of prospecting circumstance will be changed and the stimulus value will be enhanced. Shane Frederick and George Loewenstein explain this mechanism in the case of an inmate in prison. If a prisoner sets the baseline to complete freedom, there is only a little difference of satisfaction between 7 feet-wide cell and that of 9 feet-wide. However, if a prisoner adapted the current situation by changing adaptation his level to 7 feet-wide cell, there will be a larger difference between 7 and 9 feet-wide cell.⁷⁶¹ Therefore, changing the baseline prisoner can enhance the sensitivity of satisfaction. The shifting baselines enhance the difference in terms of the intensity of stimuli. This enhanced stimulus plays the similar role of Hildebrand's idea discussed in the notion of "peril" and the permutation of "enticement of prospect-refuge." The feeling of peril is inversed and becomes a thrill and perhaps some aspect of aesthetic feeling such as the notion of sublime. Another characteristic of hedonic adaptation considers sensitization. Increase of sensitivity is explained as "a

⁷⁶⁰ Ibid., 303.

⁷⁶¹ Ibid., 303 – 304.

constant stimuli increase over time.” The repetition of stimuli increases sensibility by the accumulation of “mood-dependent memory”⁷⁶² as a threshold.

For example, Tadao Ando’s association-isolation techniques interplay with the elements of nature can be understood from hedonic adaptation theory. The principle philosophy of Ando’s architecture may be an association with two conflicting oppositions such as the idea of abstraction and concreteness. This abstraction achieves his architectural aim through his “transparent logic,”⁷⁶³ and concreteness leads us to the *closeness*⁷⁶⁴ of materiality and the elements of nature. His view of architecture constitutes the bipolarities with tensions in the elements of architecture and that of surroundings. Kenneth Frampton explained his view of Ando’s work as “at the core of architectural creation is the transformation of concreteness of the real through transparent logic into spatial order.” This order is realized “through abstract power” without eliminating concreteness.⁷⁶⁵ The experiences of concreteness of real may contain *oppositions* such as unfavorable influence of nature. Ando intentionally includes these oppositions to create his architecture through his logic of creative abstraction. His creative abstraction must include controversial effects of opposition to enhance a sense of tension, which makes concreteness transformed abstraction. This transformation can be the process to transform material to immaterial along with the experience of tension. Frampton sees this effect “when water, wind, light, rain and other elements of nature are abstracted within architecture, the architecture becomes a place where people and nature confront each other under a sustained sense of tension, ... that will awaken the spiritual sensibility latent in contemporary humanity.”⁷⁶⁶ Ando’s architecture entices with the interplay of nature and manmade nature by setting the conflict and permutation between the elements of nature and element of architecture. From hedonic adaptation view, Ando increase the

⁷⁶² Ibid., 305.

⁷⁶³ Kenneth Frampton, "Tadao Ando: Beyond Horizon in Architecture," in *Theories and Manifest of Contemporary Architecture*, ed. Charles Jencks and Karl Kropf (West Sussex, UK: Wiley-Academy, 2006), 256-57.

⁷⁶⁴ The ‘closeness’ is relevant to that of Heidegger’s notion of closeness (the notion of nearness).

⁷⁶⁵ Frampton, "Tadao Ando: Beyond Horizon in Architecture.", 257

⁷⁶⁶ Ibid., 258

association with the elements of nature that creates negative stimuli while decreasing this negativity with subliminal experience. In such a case the user needs to get through unfavorable nature to feel comfort instead. Ando intended to make this controversial trick with oppositions in his architecture. Isolation creates increased association, desired feeling of fulfillment by making this desire abstracted. This process is equivalent to the notion of prospect that conceives the elements of aesthetic. The perceiver must act with baseline shifting of hedonic adaptation at the time. His strategy in making layouts of open-closed space sequence provides favorite stimuli by applying hedonic adaptation transit.

Another example can be seen in deconstructivist work. Tschumi's notion "architecture is always the expression of a lack,"⁷⁶⁷ and the influence of Adorno's negative dialectics on Derrida share the origin that creates values which is proxy and expectation. I propose this phenomenon is originated from the adjustment of survival that is brought by the process of hedonic adaptation. Deconstructivist architecture chiefly owe to this expression of lack. Psychology shows as problem solution that Arnheim and others showed this phenomenon. It is a desire to have. When our desire becomes foreground our judgment baseline is moved to in favor to receive the benefit of pleasure. This is controversial because it is not real benefit rather illusion in a sense. However, interplay of many illusions may create further reality. When this happens, our perception toward aesthetic object is uplifted.

I will summarize the process of hedonic adaptation aligned with the notion of prospect-refuge and aesthetic experience. The first form of hedonic adaptation takes desensitization of stimuli because of the process of survival. However, constant stimuli act in an opposite way to sensitize hedonic intensity. Regarding the second form of hedonic adaptation, within a circumstance when we change our focus onto a local situation, the baseline shifting of our cognitive behavior occurs. As the result of this

⁷⁶⁷ Tschumi, "Question of Space," 137, 142, cited in Martin, "Transpositions: On the Intellectual Origin of Tschumi's Architectural Theory," 27.

shifting, we enhance the difference of intensity of stimuli. In an actual situation, these two forms of hedonic adaptation are preceding simultaneously. Pursuing the connection to aesthetic experience, I emphasize the two moments in the process of aesthetic experience. The first moment occurs at the moment of aesthetic judgment, and second moment is that of aesthetic appreciation. If these moments can be an analogy of Hildebrand's notion of prospect-refuge interplay, refuge complies with aesthetic judgment and that of prospect is aesthetic appreciation. Refuge is habitant and comfort while prospect is a view of unknown, expectation, and curiosity. Moreover, prospect-refuge interplay permutes the position of refuge and prospect and hierarchical and complex.⁷⁶⁸ The consummation of aesthetic experience requires persistence and appreciation—a pleasurable experience. These considerations imply the similarity between aesthetic experience of judgment-appreciation interplay and complex process of hedonic adaptation. For the duration of aesthetic experience, the mechanism of hedonic adaptation is playing the role to shift baselines and the mechanism of survival. Shifting baseline is continuous and permuting the position of baselines. Each baseline includes the moment of aesthetic judgment (refuge) and the moment of aesthetic appreciation (prospect). The shifting baseline process creates hierarchical structure and prospect-refuge interplay. By shifting baseline aesthetic experience is constantly changing a locality and a focal point in a circumstance. In the next section I will analyze work of architecture following my proposition regarding shifting baseline process, stated above. Rudolf Arnheim explained psychological adaptation regarding particularity of viewer's perception has an influential factor named "adaptation level" that can be used as a reference of baseline. According to Arnheim, "the adaptation level helps determine the degree to which a particular quality is experienced."⁷⁶⁹

The mechanism of prospect-refuge and hedonic adaptation contribute to the generation of aesthetic experience in the end. While on the process of this mechanism is working,

⁷⁶⁸ Hildebrand, *Origin of Architectural Pleasure*, 33. Regarding the complexity of prospect-refuge interplay Hildebrand explained its structure is hierarchical.

⁷⁶⁹ Arnheim, "The Dimension of Disagreement," 18.

the process of oscillation occurs between prospect and refuge as well as between two baselines of hedonic adaptation. This process is triadic process by changing status of Peircean interpretant. The outcome of this oscillation creates psychological value change that includes shifting of scale changing range of recognition in hierarchical manner. Because recognitions are ideas and thoughts, which are interpretants by definition, Peircean immediate interpretant triggers first step of value changing, and dynamic interpretant deals with this transit of semiosis by mediating signs in order to make meaning clarification until obtaining the eternity of final interpretant. This shifting interpretant for meaning clarification at some degree provide the equivalency of mechanism of Peircean reduction. In the logic of hypostatic abstraction, the replacement of certain combination of monadic, dyadic, and triadic identity creates the process of reduction that is meaning clarification is supporting the formulation of Peircean semantic logic.

Peircean semantics holds three levels including *depiction*, *representation*, and *expression*. The three levels are associated with the two stages of extension and intension systematized in his universal view of relativity. The extensional stage is for formal aspect of PAL, while the intensional stage is that of mental activity and worldview. The depiction semantics requires immediate totality for the recognition. The shifting scale must be relevant to a setting of range for recognition. Without setting a scale, things will not be articulated as depiction. Shifting scale is definitely necessary of meaning clarification of depiction. Representation is equivalent to mimesis that makes reference. A reference can be dyadic relations such as juxtapositions. Essentially, formal mode of architecture is on the level of representation. The expression semantics attaches more rhetorical and metaphorical level of meaning that requires many layers of hierarchical articulation. For an interpretation of architectural language through Peircean semiotic and logic, needed are analogies of the above three semantics with two stages, and the analogy of hypostatic abstraction. In short, the analysis of interpretation requires the analogy between architectural formal system and Peircean logic. In the following sections, I will discuss architectural classical formal system and Peircean logic. The

concept of oscillation as creative sources started from the analysis of the relationship between philosophy and architecture, Saussurean dyadic language, and then survival aesthetic theory. This concept must be accomplished with my research role applying Peircean semeiotic and logic onto architectural formal system and its interpretation.

VII.8 Architectural Formal System (Tripartition)

The interpretation of architectural formal system through Peircean triadic system is underpinning to the Peircean interpretation of postmodern architecture. I focus on the analogy between tripartition of architectural system and triadic Peircean language system. Peirce's three modes of being including (1) firstness, (2) secondness, and (3) thirdness, over three categories of relation between (1) sign itself, (2) sign to object, and (3) sign to interpretant configures triadic semeiotic system to explain sign phenomenon. The notion of hypostatic abstraction explains that all relations are possibly constructed with the certain combination of monadic, dyadic, and triadic relations with relative manner. This relativity is related to the role of interpretant and additive entities of hypostatic abstraction as I described in the previous chapter (Chapter VI – *Peircean Semeiotic and Semantic Logic*) and Introduction of this chapter. Tripartition system of architectural form configures an entire system of architecture with the composition of three-parted formal hierarchy. I extend the meaning of tripartition from the physical three parts division to the relationship of three and more than three including our mental activities associated with the formal expression of architecture. The perception caused by work of architecture is complex in terms of its formal system and the relations to the perceivers' mind. In the case of formal tripartition obviously the structure is hierarchy, while along with mental relation to the formal system of tripartition. The relation of latter has possibility to be more heterarchy.⁷⁷⁰ The notion of heterarchy concerns non-hierarchical relationship that explains non-linear complexity. Hierarchy and heterarchy

⁷⁷⁰ The notion of 'heterarchy' was introduced by Warren S. McCulloch. The terms are originated Greek terms, "*heteros* (the other, the alien, ...) and *archein* (to reign, to govern, ...), i.e., *under governance of an alien*." See, Goldammer, Paul, and Newbury, "Heterarchy - Hierarchy: Two Complementary Categories of Description."

are complimentary in category. In postmodern architecture, Venturi demonstrated this phenomenon of anti-rational architectural formal system in *Complexity and Contradiction*. The analysis will be extended to non-hierarchical formal aspects and cognitive reality of architectural meaning.

An authentic explanation of architectural composition was developed by the notion of *tripartition*, which composes three elements in sequence and relations in classical language of architecture. Alexander Tzonis and Liane Lefaivre approached classical canon in line with the Vitruvian system, which includes (1) *taxis*, (2) *genera*, and (3) *symmetry*.⁷⁷¹ The notion of ‘*taxis*’ is explained as acting as a framework such as the column grid system. *Genera* is a kind of typology, which represents architectural elements such as column types that are governed by *taxis*. Symmetry is the relation of architectural component and elements. The *tripartition* penetrates these three levels to designate the specification of language of architecture.⁷⁷²

Tripartition consists of three segments which contains two sets of two-thing relationship. It is essentially a result in the dyadic relations.

A - B - A

A - B, B - A

However, two dyadic relations can be extended to triadic (more than three-thing relation, relation of relations). Other possible patterns are available such as A - B, B - C, C - A, A - (B - C), and (A - B) - C.

The research has drawn the difference and similarity between dyadic relations and triadic relation. It is acceptable that the tripartition is hierarchy system but triadic relation can be beyond hierarchy. The research pursues two different results, one is both tripartition and triadic semiotic are the same or different. Since tripartition has the characteristics of hierarchy, the first result could yield that Peircean triadic works with hierarchy within the relation between object and sign. But in the relation between sign

⁷⁷¹ Tzonis and Lefaivre, *Classical Architecture: The Poetics of Order*.

⁷⁷² Ibid.

and interpretant, if the triadic relation cannot be hierarchical (it is rather heterarchical), the characteristic of tripartition is different from that of Peircean triadic structure. Thus, the realm of tripartition can be different depend on the level of the relations. If an analogy can be made for the role between tripartition and that of interpretant, tripartition can be coherent in Peircean semiotic. In this case, interpretant and tripartition both should be a sign which creates triadic mode following the definition of interpretant described by Peirce. The notion of tripartition is about system that is an idea penetrates all configuration of architecture. Even if we accept the difference of degree for the role of tripartition upon the difference of architectural style, including classical cannon, modern, and postmodern, the tripartition has shared role with interpretant because of the possible equivalency as sign. Peircean theory, signs are equivalent to ideas and thoughts. Therefore, an analogy of architectural formal tripartition and Peircean logic, semeiotic around the notion of interpretant is valid assumption.

Regarding hierarchy of tripartition, there is another possibility. If tripartition has heterarchical aspects, and if interpretant is heterarchical, Tripartition has both aspects including hierarchy and heterarchy. Since tripartition penetrates all three level of formal system, it is obviously it has heterarchy. Tripartition can designate simultaneously for three levels. In addition, possibly multi-level tripartition should be connected coherently when the formal system is projected on our experience and perception. The characteristics of Peircean interpretant possibly hold heterarchy and hierarchy. In the following section I will discuss the relationship between tripartition and interpretant that holds ubiquitous characteristics by shifting modes and scales. Through this characteristics Peircean triadic relation has strong possibility to be expressed by the relation of heterarchy.

VII.9 Formal System of Peircean Semeiotic and Logic

The role of *tripartition* is to implement a special configuration within formal system of architecture, and that of Peircean *interpretant* is to create a reality of architecture, which is metaphysical. *Interpretant* shifts its role in the three mode of being including monadic,

dyadic, and triadic corresponding to *immediate*, *dynamic*, and *final interpretant*. This process of shifting has the plausibility to be an analogy to that of three formal systems – *taxis*, *genera*, and *symmetry* that creates the formal interaction of hierarchical system.

The reduction process of ‘hypostatic abstraction’ involves the meaning clarification in which “all relations may be expressed as construction from relations exclusively adicities 1, 2, and 3.”⁷⁷³ Reduced meaning is available with certain combinations of monadic, dyadic, and triadic relations. Burch described applying the hypostatic abstraction, there is the effect of “*entities ... considered to be new ... beyond in [the domain] D.*”⁷⁷⁴ This new entity can be understood as an *interpretant* due to the characteristic that *interpretant* is always another sign within the system. This additional *interpretant* as *sign-tripartition* can be shifted to *immediate*, *dynamic*, and *final interpretant-tripartition* in the three modes of being—*firstness*, *secondness*, and *thirdness*. Considering the aspect of semantics, three levels of main hierarchy, including (1) *depiction*, (2) *representation*, and (3) *expression* will be corresponding to these three *interpretants* and modes. In the case study (Chapter VIII – *Case Study Analysis of Peircean Interpretation*) I will develop the conceptual model of Peircean interpretation through Peircean semantic logic and hypostatic abstraction for architecture.

VII.10 Peircean Interpretation of Postmodern Architecture

Concerning the benefit of interpretation conservatively, the clear thing is that if we have alternative interpretation, it is beneficial to understand postmodern architecture. Therefore, possible interpretation can increase our knowledge level. The Peircean interpretation of postmodern architecture will be guided by the analysis of classical formal system through classical form, ‘tripartition’ projected on ‘hypostatic abstraction.’ The analytical dimensions are deviation and complexity of the formal system in terms of *tripartition* deepening to the layers of *taxis*, *genera*, and *symmetry*. In the Chapter VIII (*Case Study Analysis of Peircean Interpretation*) this analytical model will be

⁷⁷³ Burch, *Peirce's Reduction Thesis: The Foundation of Topological Logic*, 105.

⁷⁷⁴ *Ibid.*, 107.

established as a part of case study. The categories of postmodern architecture are composed of (1) Scenographic architectural group, which includes figurative architecture, and (2) Contextualism architectural group, which includes neo-rationalism architecture and critical regionalism architecture. In the Chapter V (*Saussurean Postmodern Architecture*), I defined deconstructivist architecture is equivalent to scenographic postmodern architecture because of its dyadic structure. The difference is essentially associated with the desire of signification, which is proxy signification or that of fulfillment. I called deconstructivist postmodern architecture as ‘*negative scenographic postmodern architecture*.’ Therefore, in Peircean interpretations of postmodern architecture only two categories are essentially necessary.

Figurative architecture shows classical architectural vocabulary with the deformation and permutation. The notion of narrative time such as Paul Ricoeur’s new time crates the reason for the deformation of the use of vocabulary along with the specific chronology. The use of classic formal vocabulary is distorted and labeled as postmodern classicism. Language of this architecture is characterized by rhetorical and metaphoric application of form. Peircean interpretation allows explaining the method of narrative with the connection of the mode change. Neo-rationalism and critical regionalism architecture holds characteristics of less stylistic vocabulary keeping the context burden relation to place. The approach from Peircean interpretation will be used to compare these two groups. Peirce negated foundationalism and nominalism as the same as postmodernism in philosophy pursued the immanence of norms. This denial mode can be seen in postmodern historicism expression through Peircean interpretation. The reciprocal relationship between postmodern philosophy and pragmatism was discussed in the previous chapter, (Chapter IV – *Postmodern Philosophy*). In short pragmatism can provide the contents and supports for postmodernism desire with appropriate way. Postmodern architecture is likely to follow the similar situation. If the established notion of Peircean tripartition-interpretant follows this format, this notion will support and provide means to understand postmodern architecture with Peircean way. The notion of tripartition-interpretant is not only postmodern architecture. If this treatise is universally

applicable, we would have more opportunity to analyze the language of architecture beyond postmodern. For example, the *modernism canon* architecture uses *tripartition* more subtle in its language system as opposed to scenographic postmodern architecture. The Peircean interpretation assigned to both scenographic architecture and contextualism architecture will indicate that meaning of architecture interpreted by *tripartition method* is more critical beyond the architect and the difference of style. Through Peircean interpretation the characteristic of postmodern architecture between scenographic architecture and contextualism architecture will be addressed. The fragmentation in scenographic architecture can be identified in this method as a critical indicator. Thus, Peircean interpretation of postmodern architecture can be an effective method understood in the contemporary context surrounding architecture, and shows generality more than that of Saussurean originated postmodern architectural styles and their theories.

CHAPTER VIII

CASE STUDY ANALYSIS OF PEIRCEAN INTERPRETATION

VIII.1 Conceptual Model of Peircean Logic (Application to Architectural Model)

VIII.1.1 Introduction

In order to analyze architecture, Peircean Algebraic Logic (PAL)⁷⁷⁵ will be utilized as a conceptual model projecting on Peircean architectural language. The corresponding structure between PAL and a language of architecture specifies the nodes that are critical for this research aim. This connection maintains theoretical underpinning of Peircean semeiotic, chiefly the notion of *interpretant*. PAL is developed as Peircean way of reduction theory with the central theory of “*hypostatic abstraction*.” This logical consequence should be applied along with Peircean Thirdness mode according to Burch. While this research construct a conceptual model following the primitive structure of PAL including: *PAL terms, terms operation, terms composition, semantics, hypostatic abstraction, and graphical syntax for PAL*, a basic specification of a language of architecture is based on Vitruvian syntax and compositions which are *taxis, genera, and symmetry*. The notion of tripartition that penetrates those compositions was compared with the theoretical characteristics of Peircean interpretant in the previous chapters in order to analyze the role of *tripartition*. The established concept of the similarity between tripartition and interpretant play the major role for this conceptual model logic. I will describe the composition and component system of PAL and the related architectural language components which will be developed as the nodes between the system of PAL and a Peircean language of architecture. The primary concept is associated with the two layers of the notion of semantics in PAL which includes the notion of *enterpretation* and *interpretation*, and their corresponding architectural

⁷⁷⁵ With regard to the quantificational logic Burch summarized what contains in and how should be understood: “PAL contains primitive terms of all adicities ≥ 1 , which are intuitively understood to denote relations; and it contains operations of construction and reduction are defined. The terms of PAL are to be understood as corresponding in a precise manner with the well-formed formulae of first-order predicate logic with identity, which I shall refer to as ‘quantificational logic.’ ” See “Peirce's Reduction Thesis,” 235.

language element, components, and structure. The use of hypostatic abstraction is associated with the theoretical conjecture of the notion of *oscillation*, *shifting modes*, and *survival aesthetic experience*. In the following, I make an interpretive reformulation for the essence of Peircean Algebraic Logic through *A Peircean Reduction Thesis* in order to seek the connection to Peircean architectural language structure.

VIII.1.2 Peircean Basic Entities and Operations of PAL

The most fundamental unit of PAL is defined as *primitive terms*. The notion of terms however is “intended to stand for relations.”⁷⁷⁶ The essential role of the primitive terms is to designate the some level of meaning with this *stand for relations* in semantics of PAL. This stand for relation is a primal source in generating Peircean semeiotic discoursed as triadic relation that complies with the notion of *hook* and the notion of *adicity*. The notion of adicity was explained in the previous chapter in *Peircean Logic*. In addition, it is also one of the six properties of elements that explain the characteristics of PAL terms and elements. It relates the concept of valency formulae to bond and connect entities like such as ions. The terms consist of hierarchical structure that generates the categories of elements, array, and assembly within the system of PAL. Elements of PAL are “formed from primitive terms by finitely iterated *application* of certain Peircean *operations*.”⁷⁷⁷ The notion of application has special meaning that designates the *ionic* concept of valency formulae that takes place to develop the whole PAL’s theoretical origin and *Peircean Unitary logical vision*. By providing an operation such as junction operation, primitive terms composition and generation as a unit. This generation process requires the precise matching of the adicities in terms of numbers and that of number depend on the set rules of operations. *Array* of terms are defined as “to express relation expressed by elements” of terms.⁷⁷⁸ This concept is associated with the notion of bonding and creates the composition of terms in PAL. Arrays consist of a sequence of elements within the system. Therefore, an array consists of sets that include

⁷⁷⁶ *Peirce's Reduction Thesis: The Foundation of Topological Logic*, 8.

⁷⁷⁷ *Ibid.*, 10.

⁷⁷⁸ *Ibid.*, 24.

elements. “Assemblies potentially express relations and represent relations by comprising a collection of arrays,”⁷⁷⁹ by treating the special operation called *retraction* that eliminates 0-adic elements involvement. Assemblies are critical in terms of the topological creation for graphical syntax of PAL.⁷⁸⁰ Intuitive understanding regarding the process of retraction is that 0-adic elements have less or no association for creating an assembly topology by collecting arrays.

The function of *operation* includes *negation*, *permutation*, and *junction*. The operations are applicable to both array and assembly level of terms. Moreover, universally PAL semantics system takes these operations. In the later paragraph, I will explore the basic concept of the two levels of semantics, *extensional semantics* and *intensional semantics* that will be nodal points plugging-in to the system of architectural language. *Negation* operator is that holds the negations of relation in primitive terms, elements, array, and assembly. Also it will apply to PAL semantics levels as the role of *complementation* of relations. *Permutation* operator works “to express the relation that is converse relations of the relation expressed by terms.”⁷⁸¹ Since elements are expressed by operation including permutation, the sequence of elements in array might be permuted, hence elements consists of many terms with many adicities. Also, assembly takes same kind of way of permutation since assembly includes elements formed by primitive terms as a collection of array after retracting 0-adic elements in arrays. Two different junction operations are available depend on the situation of elements. In order to be some elements terms must be composed through operation. Let’s say, element consists of primitive terms with finite sequence within an element. Two scenarios can be possible; one (called Join₁) where the operation can be within the same term or element, that of another (called Join₂) between the two different terms or elements. “Join₁ is to be understood to represent an operation on a single relation of adicity ≥ 2 .”⁷⁸² “Join₁ connects two ‘loose ends’ in a single relation of adicity, yielding a relation of adicity

⁷⁷⁹ Ibid.

⁷⁸⁰ Ibid., 19.

⁷⁸¹ Ibid., 10.

⁷⁸² Ibid., 11.

2 less than the relation so operated upon.”⁷⁸³ The second type of junction, Join₂ connects primitive terms beyond single element. “Join₂ is to be understood to represent an operation on a pair of relations.”⁷⁸⁴ “Join₂ connects a ‘loose end’ of one relation of adicity ≥ 1 with a ‘loose end’ of another relation of adicity ≥ 1 , yielding as a result a relation of adicity 2 less than the sum of adicities”⁷⁸⁵ In both junction operations by connecting loose ends, element diminishes the number of total adicity within the system, let’s say collective elements to be assembled topologically appropriately in PAL. Before switching the subject to PAL semantics, assumptive consideration should be given in terms of architectural language system.

VIII.1.3 Architectural Language Entities

Architectural language entities corresponding to PAL terms have non-foundational characteristics and not to be nominalism labeled. Vitruvian categories including *taxis*, *genera*, and *symmetry* are assumed possible corresponding entities. But, the application of these should not be a static way of selection due to the characteristic that obviously architectural elements and components cannot achieve a simple clear cut of demarcation. Instead, with respect of the formal characteristic of architectural elements and components regarding Vitruvian view, three categories are describable and approachable in order to address on the plane of PAL terms’ categories. In the system of PAL, the concept of adicity penetrates entire process of logical development. It is the same as with the notion of *tripartition* for Vitruvian system. The system of tripartition applies to all aspect of *taxis*, *genera*, and *symmetry*. I discussed the similarity of tripartition and Peircean notion of interpretant in the previous chapter. This treatise discerns cyclic analogous among *adicity*, *tripartition*, and *interpretant*. The notion of *taxis* is explained as a framework that designates the architectural elements such as column. This framework constitutes topological relations and determines the sequence of elements, which forms this relation. The result of application of *taxis* provides the ‘array’ in terms

⁷⁸³ Ibid., 23.

⁷⁸⁴ Ibid., 11.

⁷⁸⁵ Ibid., 23.

of PAL terms definition. In this case, *taxis* may work as an operation to set elements for an array. However, *taxis* can provide the way of configuration in terms of spatial structure that triggers the some level of semantics of architecture in a certain level. Perhaps, that level can be associated with ‘assembles’ in terms of PAL. The categories of *genera* can be concerned with typological elements that compose many different hierarchical elements’ layers. Within an element of *genera* there can be a smaller unit of element, which has juxtaposition with another unit of element with the tripartition systems through various PAL operations such as junction and permutation. While ‘array’ was designated by the system of *taxis* in case of column, each column contains hierarchical composition of elements. Along with the notion of primitive terms of PAL, *genera* has a possibility to be a terms with certain number of adicity. The mostly this adicity will be three because of the *tripartition* formal system that is three-thing relations. In PAL all relations are reduced to monadic, and dyadic, and triadic relations in the certain condition.⁷⁸⁶ Tripartition has possibility to be extended to general relations beyond mere formal relation of three parts of element of architecture. The notion of symmetry is relation of architectural components and elements. When this relation is applied to the composition of architectural elements the function of symmetry is acting as some of PAL functions such as retraction in order to make ‘assembles’ of architectural compositions which includes architectural elements and architectural terms. The following are the definable corresponding categories of this case study between PAL and classical form of architecture. (1) *Primitive terms* are corresponding to generic form of *genera*. *Taxis* can be partially to be primitive terms that can stand for directly some of *genera* which are primitive terms while *taxis hold the possibility of operation*. This is understandable from the definition of primitive term of PAL. It is said that “the primitive terms of PAL are terms that are intended to stand for relations of all integer adicities $n \geq 1$.”⁷⁸⁷ The level of adicity is no less than 1 means architectural terms need

⁷⁸⁶ This explanation is also general regarding to the Peirce’s reduction thesis. “According to Peirce there are only three fundamental classes of relations: monad, dyads, and triads. For example see Nathan Houser, "Introduction," in *Studies in the Logic of Charles Sanders Peirce*, ed. Nathan Houser, Don D. Roberts, and James Van Evra (Bloomington, IN: Indiana University Press, 1997), 14.

⁷⁸⁷ Burch, *Peirce's Reduction Thesis: The Foundation of Topological Logic*, 8.

some level of relations to other terms inside of elements or outside of elements. (2) *Elements of terms* are composed of genera and the structure of elements is not a single layer it is hierarchical based on the form of tripartition. Stylish components of architectural elements belong to this categories and representing some layer of semantics. When this semantics are assigned, elements layers are turned to (3) *arrays* as the composed collection of elements. The PAL semantics will be address in terms of this study model in the next paragraph. Lastly (4) *assembly* can be seen as the result of composition of array that can be organized symmetries in a language of architecture. When array becomes an assembly in PAL the function of retraction has special role that is relevant to semantics of PAL. Retraction works in a way that eliminates kind of duplications of terms. The terms which have 0-adic will be eliminated from the array therefore from elements. The degree of 0-adic for an architectural terms and elements can be considered as something that does not have relations to other terms or elements. The relation is the origin of meaning that is “stand for.” This category is not like the idea of “Null.” There can be entities disconnected or unseen in the realm of architectural metaphysics in the primordial level of architectural language. PAL deals with semantics dimension that shows the possible form of semantics structure for Peircean interpretation of architectural language. In the following two paragraphs I will define the model of semantics. First I will return to the review PAL and its two levels of semantics logic, and then I will define the architectural semantics structure projected on the model, Peircean Interpretation.

VIII.1.4 Peircean Semantics at Extensional Level

PAL defined two levels of semantics including called (1) *enterpretation* as *extensional semantics*, and (2) *interpretation* as *intensional semantics*. Extensional semantics consist of the pair structure with domain and function describe as $(D, *)$. This function defines “that being a function from terms of PAL to finite sequences of what will be called ‘class of n-tuples’ over D , with $*$ satisfying certain conditions. $*$ will be called an

Enterpretation function.”⁷⁸⁸ D is any domain of Enterpretation for PAL. The class of n-tuples over domain D is a set, and “the terms of PAL are interpreted as ‘classes of n-tuples’ over a domain D.”⁷⁸⁹ Like primitive terms and elements of PAL, Classes of n-tuples take operations including *Complementation*, *Permutation*, *Cartesian Product*, and *Selective Double Deletion*. These operations are additions to the terms operations which includes negation, permutation, two junction operations ($Join_1$ and $Join_2$). Classes of n-tuples over D is defined as matrices of n-tuples. Using operation Cartesian Product and Retraction, three levels of Enterpretation are defined: (1) *depiction*, (2) representation, and (3) expression of array of PAL. Enterpretation becomes *depiction* when enterpretation is assigned to n-tuples of array. Enterpretation becomes *representation* when Enterpretation is assigned to n-tuples of the result of Cartesian Product of array. Enterpretation becomes *expression* when Enterpretation is assigned to n-tuples of Cartesian Product of the result of retraction made array.⁷⁹⁰ The same enterpretation function can be applicable with three different levels of extensional semantics by changing the level of terms’ conditions in case of as simple array, array after treated with Cartesian Product, and array after treated by both retraction and Cartesian Product. Operation *complementation* works to denote ‘not a member’ of classes. “The *permutation* operations operate columnwise on matrices of n-tuples over a domain D”⁷⁹¹ to define the position of entities inside the class matrix. The ‘*Cartesian Product*’ of a class of n-tuples over D operates the kind of division or concatenation (block matrix) and factor (column-vectors) on the matrix of classes. Selective Double Deletion operates the selection and deletion of assigned classes from the classes of n-tuples (matrix) over D. With these four classes of operations and other operations including negation, permutation, joint operations ($Join_1$ and $Join_2$), and in the connection with an arbitrary array Enterpretation function was defined. These are *depiction*, *representation*, and *expression*. Array consists of elements, and element consists of primitive terms of PAL. The definition follows:

⁷⁸⁸ Ibid., 27.

⁷⁸⁹ Ibid.

⁷⁹⁰ Ibid., 38.

⁷⁹¹ Ibid., 31.

“Let any array α of PAL be given. Also, let an Interpretation $(D, *)$ for PAL be given. Then:

- (1) α will be said *extensionally to depict, with regard to $(D, *)$* the sequence of classes of n-tuples $*(\alpha)$ over D ;
- (2) α will be said *extensionally to represent, with regard to $(D, *)$* the sequence of classes of n-tuples $CP[*(\alpha)]$ over D ; and
- (3) α will be said *extensionally to express, with regard to $(D, *)$* the sequence of classes of n-tuples $CP\{Ret[*(\alpha)]\}$ over D .⁷⁹²

Therefore; (1) the application of Interpretation to any array (that is described as $*(\alpha)$), any array depict extensional semantics, (2) the application of Interpretation to any array after applying Cartesian Product (that is described as $CP[*(\alpha)]$), any array represent extensional semantics, and (3) the application of Interpretation to any array after applying Cartesian Product to the retracted array (that is described as $CP\{Ret[*(\alpha)]\}$), any array express extensional semantics. The relation to architectural element with semantics of PAL these three are the nodes of analysis of architectural semantics in Peircean interpretation with respect to the extensional level that correspond to physical formal system of language in Peircean interpretation. This will be described in the later paragraph of this section.

VIII.1.5 Peircean Semantics at Intensional Level

While extensional semantics is logically explored with the notions of sets, class of n-tuples, and so on, the process of extensional semantics still has limitation to explain the essence of relations, “stand for.’ Intensional semantics provided for this purpose. The relation of ‘stand for’ has to be involved with the worldview and mind issues. PAL intensional semantics presupposed with the connection with possible world with informal way. The notion of *relations-simpliciter* was introduced in order to systematize analogous process to induce *Interpretation* in the three levels including (1) *depiction*, (2)

⁷⁹² Ibid., 37-38.

representation, and (3) *expression*. These are similar to that of *Enterpretation*. In the shorthand understanding is that Interpretation is defined setting a *modal structure* which is possible world between domain D and PAL. The concept of relation-simpliciter plays the important role for intensional semantics.

Modal structure $M = (W, D)$ for PAL, and D_w is provided as set of D. The D_w is indexed with w to indicate domain of W. The setting W derived from the concept of Saul A. Kripke's "Modal Logic." "Each possible world w in W has its domain D_w , which may be conceived as the set of all entities existing in w ."⁷⁹³ Indexed class C_w (indexed with w) is defined as the classes of n-tuples over D_w . And, set C is defined to be the set of all C_w . Then, relation-simpliciter of adicity n is defined as the function Ψ from W to $\cup C$. "For each w of W, $\Psi(w)$ is a class of n-tuples X^n over D_w . Then, "equivalently, $\Psi(w)$ is a class of n-tuples X^n in C_w ."⁷⁹⁴ Following this definition, "a relation-simpliciter is a once-for-all specification for each possible world, of the extension of that relation-simpliciter with respect to that world."⁷⁹⁵ With applying operations of complementation, permutations, Cartesian Product, and selective double deletion to relation-simpliciter, and considering with duplication of retraction, the notion of intensional valuation function ι is introduced in order to specify Interpretation of PAL with the connection to Enterpretation function. It is defined that " ι is an *Interpretation for* PAL if and only if ι is an intensional valuation function for PAL such that *for every w in W* the function $*_{\iota w}$ induced by ι is an *Enterpretation function* for PAL, so that the pair $(D_w, *_{\iota w})$ is an *Enterpretation for* PAL"⁷⁹⁶ Thus, intensional semantics of PAL is analogous to extensional semantics. Other words, intensional semantics are based on extensional semantics with appropriately induced by ι which is *intensional valuation function*. For Enterpretation and Interpretation the same operations are used in order to facilitate "the task of presenting the connection between the extensional semantics and intensional

⁷⁹³ Ibid., 39.

⁷⁹⁴ Ibid., 40.

⁷⁹⁵ Ibid.

⁷⁹⁶ Ibid., 44.

semantics.”⁷⁹⁷ The relationship between Interpretation and Interpretation is described that “each Interpretation ι induces a family of Interpretations $(D_w, *_w)$, one such for each w of W . It therefore follows that if a result can be proved for all Interpretations $(D, *)$, then this result applies to all Interpretations $(D_w, *_w)$ induced by all Interpretations ι .”⁷⁹⁸ The three levels of Interpretation ι for PAL are defined in the following for any array α of PAL:

- “(1) α will be said to *depict* on ι the *sequence of relations* $\iota(\alpha)$;
- (2) α will be said to *represent* on ι the *relation* $CP[\iota(\alpha)]$; and
- (3) α will be said to *express* on ι the *relation* $CP\{\text{Ret}[\iota(\alpha)]\}$.”⁷⁹⁹

Any array α of PAL is made of terms of PAL therefore, terms are expressible the relations through the notion of interpretation with three different levels in terms of intensional semantics that are on top of extensional semantics. The sequence of relations of terms of PAL which make array can be depicted by array which consists of terms, and relation of terms which are treated by Cartesian Product (written as CP) process can be represented by array, and terms which are retracted and treated by Cartesian Product process can be expressed by array. There three levels of terms are associated with the level of relations in a sense. The first level is sort of like first-hand relations which is immediately accepted. The second relation can be said as some processing relation which is not the final. And, the third relation is the relation which is appropriately treated one which can be said the final relation. Among Peircean semeiotic theory, the notion of interpretant explained the three different categories by Peirce. That includes *immediate interpretant*, *dynamic interpretant*, and *final interpretant*. Interpretant is a sign which can be a term and a deliverable from terms such as array and assembly. Terms of PAL ‘denote a relation’ to express relation. According the PAL system, this *relation* is of adicity like terms of PAL by the definition of *relation-simpliciter*. Therefore, by taking the analogy of three stages of interpretant and three levels of relation can be postulated.

⁷⁹⁷ Ibid., 42.

⁷⁹⁸ Ibid., 45.

⁷⁹⁹ Ibid., 48.

Terms to be depicted, represented, and expressed are the all through interpretation ι , but likely to be made in the different modes. The interpretation function $\iota(\alpha)$ is associated with directly to the *sequence of relations for depiction*. That is immediate interpretation and equivalent to immediate interpretant mode (*monadic mode*). When the interpretation function deals with the relation of array which is the result of Cartesian Product, terms are sorted and articulated to be informative *relation for representation*. That is making units through analogy and comparison which is dynamism between entities. It can be understood through dynamic Interpretant mode (*dyadic mode*). Lastly when interpretation function takes retracted and resulted as Cartesian Product, terms are not only articulated but also adjusted to the meaningful units. This process should be understood through the interpretation which has level of message and affectivity of *relation for expression*. This is the highest level of interpretation through final interpretant mode (*triadic mode*). Regarding the adicity, if representation and expression is in the same mode, the adicity of terms within array should be all 0-adic or no 0-adic.⁸⁰⁰ This special case can be understood as the sort of like extreme case such as no-relations (all 0-adic) or all relation is fixed without any transformation—tight relationship between terms (no 0-adic). Perhaps, the equivalency of expression representation is also varied in degree in terms of the determination of level of 0-adicity, which I believe almost unlikely to be applicable for Postmodern Architecture. Postmodern Architecture has tendency to against determinism that can be seen in modernism architecture. However, this loose connection of meaning—*stand for* is not just for the result of relations. It is rather continuously generating relations. In case of postmodern this generation mode is different from that of modernism architecture which has tight relations between architectural terms and meaning. The intensional semantic is involved with the mind issue. The idea can be extended to metaphysical relations through *interpretant* by changing the sages of immediate, dynamic, and final. In the following paragraph, I will construct a Peircean interpretation of architecture with

⁸⁰⁰ Ibid., 38. In case of Interpretation only 0-adic or no 0-adic makes representation and expression to the same result because there is no change of length and the effect of retraction for array in $\iota(\alpha)$. Since Interpretation is induced by Interpretation, it should be applied to intensional semantics.

respect of extensional semantics (formal relation) and intensional semantics (architectural meaning).

VIII.1.6 Architectural Language of Extensional Semantics

Architectural language extensional semantics can be approachable through solely by taking formal architectural language at first. By analyzing PAL primitive terms the sketches are made for architectural language terms, elements, array, and assembly in former subsection (VIII.1.3). The three levels of *extensional semantics*, *depiction*, *representation*, and *expression* will be used as the guide to project Vitruvian classical language system including the notion of *taxis*, *genera*, and *symmetry*, and the notion of *tripartition* which penetrates all above three categories. These are corresponding to (1) defining the sequence, (2) analogical units, and (3) form orchestration within the realm of architectural formal structure. Secondary in case of architectural language intensional semantics, the approach will be made through PAL intensional interpretation three levels that consist of (1) depiction, (2) representation, and (3) expression. Intensional semantics for architecture is more associative for the meaning of architecture which deals with mind activity rather than explicit formal structure of architecture. These are corresponding to sequence of relations, representation, and expression of architectural language. The interpretation process of architectural language is closely associated with the notion of oscillations and shifting concept of architectural language which described in the previous chapter (Chapter VII). Two approaches in language of architecture through Enterpretation and Interpretation help building the primitive structure of architectural language that is parallel to the theoretical underpinning of Peircean semeiotic. These connections will be developed in the later paragraph of this section with the conjunction of the notion of *hypostatic abstraction* of PAL. Architectural language semantics will be projected on the notion of Enterpretation and Interpretation in order to analyze the connection between formal system (physical construction of architecture) and mental system (metaphysical entities relations in architecture). This connection can be found as *nodes* between them are maybe like matrix of classes of

predicate logic. Architectural components and terms can predicate for other components in the Interpretation, while architectural components and terms can predicate for non-architectural elements such as surrounding beings in case of interpretation which involves with mental activity of human. Peircean secondness mode requires mental activities of experience. Therefore, in actuality an architectural meaning as relations exists at any part of architecture including non-architecture by extending as interpretant. For example, the notion of *locus* by Rossi and Eisenman explicated architecture as experience and event.⁸⁰¹ These relations are not single relation of relations at some level, but at other levels such relations are taken as *unary* rather than *binary* relation.⁸⁰² According to Burch Peircean reduction system is essentially based on the monadic view. He called Peirce's *iconicity* vision for his system as *unitary logical vision*. Peirce "remained constant despite the change in its formulation."⁸⁰³ The terms in monadic mode of relations through class of relations of architectural components and terms are basic concept to be taken to architectural language model in Peircean interpretation. In PAL, terms become elements by applying the operations. Then, terms can be arrays to be specified as assemblies when they construct themselves with perhaps some motivation such as the projection to the possible world. The following is the direction for defining three levels of Interpretation of architecture, which is projected on the notion of syntax of Vitruvian view, namely taxis, genera, and symmetry.

VIII.1.7 Classical Architectural Syntax

Vitruvian Classical architectural syntactical forms are described by Alexander Tzonis and Liane Lefaivre.⁸⁰⁴ Classical architecture composed of three categories of formal system which includes taxis, genera, and symmetry. The review of this system and subsystem can be extended and developed to apply to the model system for a Peircean interpretation of architectural language. In summary, these three terms of classical

⁸⁰¹ Rossi, *The Architecture of the City*.

⁸⁰² Burch, "Peirce on the Application of Relations to Relations," 206.

⁸⁰³ Peirce's *Reduction Thesis: The Foundation of Topological Logic*, 3.

⁸⁰⁴ Tzonis and Lefaivre, *Classical Architecture: The Poetics of Order*.

architecture formal system are defined: “(1) *taxis*, which divides architecture works into parts; (2) *genera*, the individual elements that populate the parts as divided by taxis; and (3) *symmetry*, the relations between individuation elements.”⁸⁰⁵ Divided building part by taxis is filled by architectural elements in order fit the framework of taxis. The taxis have two subcategories including *grid schemata* and *tripartition schemata*.⁸⁰⁶ By grid schemata the taxis is working as the framework of architecture and configuring the axial formation with rectangular and radial integration while dividing architecture into parts, which are to be guided for genera in size and location. The tripartition schema “marks the difference between the internal and external sections of a work. It divided a building into three parts, two border parts and one enclosed.”⁸⁰⁷ In addition, the tripartition schemata create hierarchy of divided form in many architectural parts such as for façade, plan, and section. The tripartition penetrates its role into architectural elements that includes the second category—genera by embedded with tripartite schema. So far, the idea of genera is appeared to be a physical and concrete matter. In the aspect of interpretation the idea of tripartition with the connection to Peircean triadic relation, this architectural language model extends the idea of tripartition toward abstract and universal system in the later paragraph with the relation to the notion of Peircean *interpretant*. The genera are architectural elements, which are guided by taxis to fill into the place with specified size and molded shapes. While grid schemata guide the location, tripartition schemata designate the allocation and size. The genera are characterized to have both concrete and abstract idea of form and materials because it is emphasized symbolic aspect of architecture. Such architectural element is represented by column as order. The typology of genera creates the hierarchy of elements for the categories of order such as Doric, Ionic, Corinthian, and more. While the genera needs to be filled precisely in the concrete location and size by the specification of taxis, this categorization symbolizes the element of architecture in the classical form in abstract aspect. The subdivisions of genera include the columnar elements and other elements.

⁸⁰⁵ Ibid., 6.

⁸⁰⁶ Ibid., 9.

⁸⁰⁷ Ibid.

The columnar elements are composed of the tripartite division system, which composes the entablature, the column, crepidoma or stylobate.⁸⁰⁸ The other elements consist of any part made out of the proportionate elements, which are molded associated with the units or coordinate of the principal rule of classical genera. The third category the “symmetry is used to cover universally all constraints of architectural composition that refer to how elements are chosen and placed in relation both to one another and to the overall structure of taxis.”⁸⁰⁹ The composition of symmetry is defined by two subcategories including *rhythm* and *rhetoric*. These are contributing to make relations composed with many elements beyond binary symmetry underlined by the guide of taxis. In the following the analysis regarding interpretation of architectural language will be conducted for *depiction*, *representation*, and *expression*.

The first category – taxis can be understood as a framer and guidance to all architectural elements and relations in symmetry. The locations of architectural elements and spatial allocation in terms of size will be specified by taxis. In the extensional semantics of PAL, the level of depiction is to address the sequence of array of term of PAL by depicting the elements of terms. There is an analogical equivalence between the role of taxis and the function of depiction of terms, elements, and array. The principle of taxis – grid schemata depicts the location of genera such as column and tripartition schemata specify the tripartite divisions within allocated portion of architecture by grid schemata. Architectural elements are coordinated with specific sequence of elements with regard to the interpretation for formal domain of architecture. The idea of array includes many numbers of elements and group of elements that is equivalent to PAL’s ‘class of n-tuples’ on the domain of architecture. Therefore, it is plausible to say that *the category of taxis depicts architectural elements for the function of architectural formal interpretation*. In other words, the interpretation causes to understand the relations (stand for) as depiction in the realm of formal system in the aspect of classical formal

⁸⁰⁸ Ibid., 43.

⁸⁰⁹ Ibid., 117.

system of taxis. Typically understanding the relations are the *defining the sequence* of terms, elements, and array.

The second category – genera can be understood as the units that represent the relations (stand for) between architectural elements. In the system of PAL, Cartesian Product (CP) can be understood as the process of articulation by highlighting the important entities as ‘factor’ and combining arrays (concatenation). These highlighted entities become the symbolized elements in the level of interpretation. The form of units is shaped with regard to the principle of tripartition in order to fill a portion of divided architecture by taxis, while symbolic elements will be coordinated with the appropriate relations by the category of symmetry. The notion of primitive term in PAL is defined as “terms that are intended to stand for relations of all integer adicities $n \geq 1$.”⁸¹⁰ Regarding the terms of architecture things to be considered is that terms are intended to stand for relations. In the former subsection (VIII 1.3) I made a sketch that the architectural elements such as column can be a possible primitive terms. At some level it can be true. In this subsection the more specific definition is necessary for architectural primitive terms corresponding to PAL as model. The notion of adicity represents the relation which can be filled by other adicity. This makes connection that can be seen through tripartition in the form of architecture. Embedded tripartite entities can be multiple levels but it is limited in the formal structure of architecture in normal sense. In the intensional semantics—interpretation, this limitation will be extended more levels for psychological aspect of relations (stand for) that can be more like the system of interpretant that expand the relation beyond mere formal system of architecture. For extensional semantics—interpretation the limited relations are discussed in here. The adicities represent the relations—stand for something within formal system of architecture. The connection between entities of architecture may create some sort of elements of architecture. If these entities are on some level of genera, the situation fits hierarchy system of embedded tripartite genera. Also, generate genera with tripartition can be called as elements as well due to the definition of elements that includes primitive

⁸¹⁰ Burch, *Peirce's Reduction Thesis: The Foundation of Topological Logic*, 8.

terms in limited sequence. Of course, this sequence is defined by the principle of tripartition. The compound elements are made of primitive terms with the treatment of operation. This operation works as negation, permutation, and junctions. Junction operations have two different kind of joint operations including self-refractive (Join₁) within element and two elements joint (Join₂). At least we can easily accept that primitive terms of architecture have junctions, which connect divided parts of partition of architecture. Two terms joint are the connection of terms that can be embedded genera or remaining part of composing genera such as between *base* and *shaft*, and between *shaft* and *capital*. The self-reflective joint can be seen as the function for termination for continuous repetitions of order. For example, Palladio's Palazzo Valmarana (1565) his oxymoron has the clear indication by changing the scale and figurative order of Corinthian style placement at the ending of colonnade. The operation of negation can be understood this example as well. At the end of colonnade Palladio used negation operation that the figurative pilaster was used as *other than two-story Corinthian* scale. The negation can be used as emphasis by changing the scale or type of genera. The operation of permutation can be seen in the same example that changes the sequence of formal system of appearance of small size Corinthian pilaster instead of sequence of two-story high Corinthian at the end of colonnade. As we can see here the operation can be effective at the multilevel in order to create some unified elements of architecture which is, in this example, the ending portion of Colonnade (permuted and negated simultaneously) divided by taxis—grid system and filled by taxis-tripartition. The composition of genera needs identified connection through suitability of types of subcomponent of genera through the principle of tripartition. This matching is proportionate and coordinated by the system of tripartition in order to represent the type of genera including embedded hierarchy of genera. This type is emphasized with the means of CP, which articulate the composition of genera that is now taken as array. In addition, CP can be associated with proportion that shows relation⁸¹¹ and modulation

⁸¹¹ Ibid., 88. The meaning of proportions is a kind of relation between architectural elements. Tzonis and Lefavre described "according to Vitruvius, the module establishes 'correspondence' between each 'of the

that shows modality.⁸¹² These are the attributes of genera. The proportion and modulation are universally associated with the diameter of column and shifting type of genus in the classical form of architecture. The array includes elements and therefore terms of genera. Regarding the role of extensional semantics—enterpretation, it is plausible to say that *the category of genera represents architectural elements for the function of architectural formal enterpretation*. In other words, the enterpretation causes to understand the relations (stand for) as representation in the realm of formal system in the aspect of classical formal system of genera. The genera are composed as elements through operation; also genera are divided by the principle of tripartition. Since genera have typology and repetitions, genera can be *analogical units*.

The third category – symmetry *expresses* relations, which is *depicted* by taxis and *represented* by genera. This category as a whole orchestrates a classical form of architecture. Beyond binary relation (bilateral symmetrical relation), symmetry requires the whole set of relation, relations of relations for formal system of architecture. This wholeness is capable to express architectural semantics projected on the realm of extensional semantics, enterpretation. The taxis divide architecture and address the axial sequence and tripartite fulfillment by parts of architecture. The system of tripartition guides this fulfillment between the lines of taxis. The genera are the member of parts of architecture which is depicted by the system of taxis, while the genera are addressed by the system of tripartition to have embedded hierarchy of fulfillment of tripartition with subordinate genera. The attributes of proportion and modulation of genera need to be testified through desired expression of symmetry. Therefore, along with PAL I can sketch out the system of symmetry constrains the architectural terms (genera) and emphasis concatenation of set of terms as elements (higher hierarchy of genera) to be architectural elements collections, array.

separate members even the smallest details to the whole body’ of the genus (De Architectura, bk. III, ch. 1; see figures 49, 50).”

⁸¹² Ibid., 90. Tzonis and Lefaivre explained modulation as modality that shift “from one part of a part of composition to another.” It said “In classical architecture there can be a shift in genus, in the modality of elements” like classical music changes keys in tonality.

The two schemas of symmetry are associated with this concatenation: first one is *rhythm* and the second is *rhetoric*. These schemas develop the association more towards mental relations and can be analyzed at a more detailed level along with the intensional semantics, interpretation. Here in the extensional architectural semantics the analysis is constrained with the formal aspect of architecture. “Rhythm employs stress, contrast, and reiteration”⁸¹³ in order to make articulated formal arrangement of elements. These are patterns, and express the notified clarity and emphasized on the map of the remaining architectural elements. Rhythm can be found as the compositional unit of foreground formal expressions and contrast its stress on the remaining background elements. The patterns are formed by the intercolumn space arrangement—the metric norms of intercolumniation, which can be seen metric patterns and associated with the modular system define by diameter of order. Through rhythm, a perceiver of architecture can conceptualize the formal meaning. Nevertheless, this mental interaction is associated with the intensional semantics—interpretation in Peircean interpretation of language of architecture. The aspect of rhetoric in symmetry is “governed by architectural figures, either overt or subtle.”⁸¹⁴ Rhetorical manner creates combined effect of regulation and interruption. For regulation called *overt figure*, parallelism is corresponding to the parallel alignment. Analogy is “overtly relates two or more elements of parts of building by attaching to them the same feature in an equivalent position.”⁸¹⁵ Parallelism and analogy were often combined in such works by Palladio. Overt figures apply multiple layers of treatment in order to achieve “conditions of consistency and completeness”⁸¹⁶ of formal structure. Palladio’s works shows clear tripartition application to the façades design. Within this tripartition the effect of rhetoric of *subtle figures* are embedded. At Saint Francesco della Vigna (1562), Saint Giorgio Maggiore (1565), and Il Redentore (1576-1577) his work shows subtle figures of classical architecture including (1) interruption of a series, (2) breaking off an elements, and (3) the returning to the initial

⁸¹³ Ibid., 118.

⁸¹⁴ Ibid., 117.

⁸¹⁵ Ibid., 153.

⁸¹⁶ Ibid.

series of element.⁸¹⁷ His vocabulary of oxymoron added his version of rhetorical symmetry effect furthermore. This can be seen in the treatment of columns of colonnade at Palazzo Valmarana (1565). The ending of façade is formed by the contradicted way of pilaster setting with minor sized rather than doubled pilaster or other method that usually stresses the termination at the ending. I discussed this treatment as ending with negation operation and emphasis with modulation by changing size that means changing sequence of genera. These subtle figures are also inter-connected with intensional semantics and cultural schemata, which takes the result through worldview. This worldview will be discussed along with possible world logic adapted to PAL in order to theorize intensional semantics—interpretation. I will discuss in the later paragraph regarding the three levels of interpretation.

At the level of enterpretation symmetry overcome local abnormality and pursues wholeness of unification by combining rhythm and rhetoric including regularity and interruption. The third level extensional semantics specified PAL can be understood for the third level of formal category of classical language—symmetry as the following explanation. The first of all, the array includes elements, which is terms of genera. The application of enterpretation is recognizable array, which is depicted through system of taxis. PAL describes this process as $*(\alpha)$. Then, Cartesian Product (described as CP) provides concatenation and articulation, which can be plausible to say the function of rhythm, which is described as $CP[*(\alpha)]$ in PAL. And then, the process of retraction applies rhetorical treatment, which is finally described as $CP\{Ret[*(\alpha)]\}$ in PAL. *When enterpretation is applied to array and this array is articulated with the meaningful formal units with rhythm, and with the appropriate treatment of rhetoric, the array expresses the relations. In other words, the enterpretation causes to understand the relations (stand for) as expression in the formal system of symmetry.*

⁸¹⁷ Ibid., 157.

VIII.1.8 Architectural Language of Intensional Semantics

The intensional semantics of architectural language will be discussed next. With the relation to the possible worldview Burch theorized the *intensional semantics* in PAL. Peircean interpretation of architectural language examines the possible model following this logic. Intensional semantics in PAL takes extensional semantics as the base that is projected on the possible world theory from the concept of Kripke's "Modal Logic." The notion of interpretation is connected with enterpretation through the domain of possible world in short. Peircean semantics are originally related to the idea that involves mind; therefore modal logic synchronizes with PAL because "PAL is elaborated with the idea in mind of explicating a full intensional concept of relations."⁸¹⁸ For the architectural language version, the development regarding *interpretation* will follow this model with some modification. The three levels of 'enterpretation' are defined so far with the connection to the notion of taxis, genera, and symmetry, which belong to the classical form of architecture. Interpretation involves the mental aspect—worldview that configures intensional meaning which might be called as conception to emerge the meaningfulness for the perceiver of architectural form. Intensional semantics must be carefully addressed along with this point rather than architectural meaning (stand for) is mere architectural formal relation in taxis, genera, and symmetry. In other words, Peircean interpretation is metaphysical relations while formal relation is still on the physical level so that we can grasped the hierarchical structure with the relation to PAL and classical architectural form theory with analogy. In case of interpretation the relations (stand for) can be dematerialized and hierarchical system is not linier system rather it has more flexibility and the connection of relations are heterarchical system. In a later subsection the central concept of Peircean reduction thesis—*hypostatic abstraction* will be discussed. The intensional semantics is deeply related with this concept that is the process of clarification of meaning by Peircean way of reduction which only includes monadic, dyadic, and triadic non-degenerated adicity with the special relations of Teridentity. These three adicities are of irreducible relations.

⁸¹⁸ "Peirce's Reduction Thesis," 235.

Although real involvement of the notion of Thirdness for the process of clarification of meaning—hypostatic abstraction, in this paragraph I will limit the discussion to the intensional semantics aspect that is developed from the structural base of interpretation. The system of tripartition in classical form of architecture plays important role penetrating all three, taxis, genera, and symmetry. At the level of interpretation, I will focus on this point by introducing the similarity to that of Peircean notion of interpretant with the system of tripartition. Then, tripartition will be extended toward a more universal way of tools configuring the meaning of architecture.

The recognition of architecture may start from any level of architecture in the possible worldview because we will not define or limit this possibility. However, if we have some level of unified system—universally we would be at least at the starting point for the process of recognition. Extensional semantics through taxis system can address this sequential attribute of form relations such as the allocation of column line and division of architectural form. Taxis system depicts the sequence how these layouts are made within the formal system. The intensional semantics deals with mental activity that emerge the conception and fulfill the meaningfulness on the view of possible world. The grid system and tripartition system in taxis is formalized result while the possible world may be said possible result to be created in certain condition. This condition is explained by PAL such as the condition of *retraction* and *Cartesian Product*. The idea of retraction is here can be understood with concatenation in the formal syntax (extensional level in PAL). And for Cartesian Product, the condition can be the clarification of form by making concatenation, division, and articulation. The existing pattern of grid system must be taken and synchronized with worldview that perceiver has. The array of terms (genera) was depicted by the sequence of its recognition through possible worldview. This view is a kind of partial view of totalized worldview that can be called universal view. Peircean Algebraic Logic has two folds: a universal system as the syntax of language, and a local system as semantics of language. The approach of the Peircean interpretation model is aligned with this way. As we described Peircean interpretation of architectural language is associated with the oscillation between universality and locality.

This phenomenon was seen beyond architectural style and movements in history of architecture. In addition, I described the survival aesthetic along with hedonic adaptation process. Furthermore, the relation between langue and parole in case of Saussurean thoughts was analyzed as shifting process between them. These are associated the process of shifting modes in firstness, secondness, and thirdness in case of Peircean semeiotic. To deal with this process I discussed three modes of interpretants, immediate, dynamic, and final interpretant.⁸¹⁹ Even so shifting process can be explainable through many philosophical and psychological frames, the applicability and adaptability to a language of architecture appears was not clearly defined yet. However, the concept of oscillation of semantics in general, the universality of syntactical aspect is maintained in Peirce within this logic as I described in Chapter VI (*Peircean Semeiotic and Semantic Logic*). The theoretical similarity to critical regionalism in architecture was one of the evidences for the plausibility of this approach. I discussed this aspect in Chapter VII (*Peircean Postmodern Architecture*). Since shifting is deeply associated with a mental activity, at this point these above considerations are plausibly representing the collections of possible worlds within the framework of PAL. I will discuss more details related to the notion of *hypostatic abstraction* in the later paragraph. The setting of worldviews and interpretation will be the focus.

At the first level of interpretation, the intensional semantics are not just taking the depiction by taxis by involving the possible world; it must be taking care of the starting points simultaneously with the shifting modes that is described above. The concept of depiction is associated with the notion of immediate interpretant and firstness mode. The application of syntax of taxis with the mental activity can be called as ‘depiction of sequence of relation.’ The first level of interpretation with respect to a Peircean language of architecture will be said that ‘the meaning of architecture (described as α in PAL) depicts the sequence of relations (describe as $\imath(\alpha)$ in PAL) on the fields of its immediate

⁸¹⁹ Three level of interpretant is described by Peirce. The three has also relative position and shifting, otherwise it will be nominalism that Peirce denied. See Peirce, *Collected Papers of Charles Sanders Peirce*. (CP 8.315)

interpretation.’ The meaning of architecture is associated with arrays, which are made by genera through the guidance of taxis. The idea of taxis in the context will be more like syntax in general including physical and metaphysical axial dimensions, and the system of tripartition including physically and mentally associated aspects. These aspects will hold the equivalent relations with Peircean interpretant. The meaning of architecture depicts the sequence of relations that can include some units of architecture, which can be complied with the notion of locus that composes a function and an event simultaneously. In this extent, the units of architecture can be any units that are appropriate in the unique setting of style or movement of architecture beyond the classical form of architecture. My starting of this model is based on the classical form of architecture, and the extension will be any styles of architecture if Peircean interpretation is universally and plausibly applicable to architectural language in general. The successive case studies based on this analytical model will prove this statement as conclusive result of this dissertation. *At the first level of interpretation, the notion of depiction deals with sequence of relations, which is strictly related to the syntactical elements of architecture. However, this syntax is not only formal syntax, but also it involves the mental activity of immediacy.*

The second level of interpretation is associated with the formal system of genera and possible world. As I discussed above the possible worldviews are mental activities and linked with the shifting concept. The depicted sequence of relations of architectural unit must be sorted and articulated, concatenated with the modes that define the actual architectural unit. In case of classical form, this unit is categorized as genera. The category of genera has typology and cultural taste and architectural style difference. The segmentation of genera is guided by the system of taxis in a way that fulfills the relations of tripartition. In case of classical form ‘the meaning of architecture (described as α in PAL) represents the relation (described as $CP[\iota(\alpha)]$ in PAL) on the field of its dynamic interpretation.’ The meaning of architecture is corresponded with arrays which are made of concatenated genera. The concatenated genera have characteristics of meaningful units that are articulated with the function of Cartesian Product result. The genera are

incorporated to architecture with the guide of tripartition of taxis and tripartition within genera itself along with the hierarchical system of genera itself. As relate to possible worldview, the demarcation of tripartite forms is dynamically influential each other between genera and the perception of possible worldview. The experience of architecture causes new understanding of the forms and their demarcation and the system of hierarchy. This phenomenon is guided by the capacity of cultural system. In other words, the meaning of architecture at any level of forms is strained by the cultural background. Therefore, beyond classical form of architecture perceiver of architecture will take different constrains in order to match one's cultural background. Similarly, new experience within the same system of culture triggers mental shifting process that is secondness mode in Peircean semeiotic. The notion of array in PAL can be understood as architectural unit, which is supported by the other units because at the second level of interpretation of architecture the meaning of architecture represents relation. This relation requires relativity between and among units to determine the system of tripartition which is belongs to a worldview. Therefore, the dynamism of representation must be always concerned in this level of interpretation. However, the depth of interpretation is strictly representation level. In short, meaning of architecture is conforming to the systemic level of functionality of architecture which is a hybrid system of physical form (genera) and mental form (possible worldviews). From this extent, the architectural unit described above is equivalent to this hybrid system—relations. *At the second level of interpretation, the notion of representation deals with relations which is strictly related to the cultural elements of architecture. But this cultural element is not only represented by formal relation, but also it involves the mental activity of experiences.*

The third level of interpretation is totalized interpretation of architecture through symmetry of architecture in case of classical form of architecture; otherwise it is through totalized form of architecture. This interpretation is constantly associated with possible worldviews. At the extensional semantics I described symmetry formal relations which is depicted by taxis and represented by genera along with PAL. The formal system in

symmetry has two subsystem includes rhythm and rhetorical figure. Rhythm plays the role as compositional architectural units on foreground which expresses stress, contrast, and reiteration by highlighting articulated formal clarity and patterns on the background of remaining architectural elements with the multiple layers. The clarity and patterns are associated with modulation (changing patterns of genera type) and modular system (intercommunication and size of order diameter). Rhetorical aspect of formal system has two hold systems including overt figure and subtle figure. While overt figure completes the formal consistency, on the centrally subtle figure interrupts the formal completeness. Both overt and subtle figures have associative relations in terms of interactive shifting modes in order to create the compositions of higher level of rhetorical effects. The tripartition penetrates the form of architecture, then within the system of tripartition the effect of rhythm and embedded figures of rhetoric are constructed. At the level of interpretation, formal conception of rhythm and the effect of rhetorical figure need to have interactive process with possible worldviews. The perception of formal rhythm has to be conceptualized with the conjunction of possible worldview. Otherwise it will be meaningless and not informative. The combined effect of overt and subtle figure creates the formal sequence of completeness and interruption promulgates the mental process of engagement. This process has to do with the aesthetic experience evolving the continuous shifting modes towards the final orchestration of architectural form. This highest stage of interpretation is equivalent to the Peircean notion of final interpretant. Pragmatic maxim is engaged in order to generate clarity of meaning of architecture. *At this level 'the meaning of architecture (described as α in PAL) expresses the relation (described as $CP\{Ret[\iota(\alpha)]\}$ in PAL) on the field of its final interpretation.'* *The relation in this stage is no longer mere formal system relations. It involves and the critical mental interaction with the formal system in order to generate meaningfulness of architecture.* The clarity of meaning of architecture will be sustained by the process of hypostatic abstraction with the unavoidable invitation of thirdness mode of Peircean semeiotic which is conceivable of extended tripartition role beyond the formal tripartition. Robert Venturi's '*contradiction and complexity*' exemplifies this way. I will

analyze this point in one of the eight case studies (four architect with two projects per one architect, composed with two groups of architects including cerographic architects and contextual architects) to apply this analytical model. The third level of interpretation of architecture expresses the relation that are not only formally appropriated and articulated with the system of symmetry, but also relation of architecture inevitably involves mental interaction in order to clarify the meaning of relation. This interaction has to be in the mode of thirdness. *At this level meaning clarification process—hypostatic abstraction has to be explained in terms of the relation to the meaning of architecture.* In the following subsection I will review PAL focusing on the notion of hypostatic abstraction. Then I will finalize the projection of PAL onto the Peircean interpretation model of architecture.

VIII.1.9 A Concept of Peircean Hypostatic Abstraction onto Architectural Identity

The notion of *hypostatic abstraction* is the main and critical subject of *A Peircean Reduction Thesis* in order to involve Peircean thirdness into PAL. The conceptual grapes is that through hypostatic abstraction process, in general all relations can be reduced to degenerated monadic, dyadic, and triadic relations, and the process works as the clarification of meaning. When this process is conducted, it requires always new entity from outside of original relations in order to make reduction and precede this clarification. One of the remarkable characteristics of hypostatic reduction is described through triadic identity called *teridentity*. Peirce's semeiotic theory underpins this notion that *teridentity* is *genuine* relation of three-things and more than three things relations. The analysis of this notion provides the critical differentiation between generated relation made by two dyadic relations that can be seen in Saussurean semiology and its derivative language theory. The inevitable involvement of thirdness modes is delivered by this reason. I will review key concept and operations to support this notion.

Essentially hypostatic abstraction is Peircean way of reduction. Some of the basic background concept should be reviewed regarding the relations and theoretical underpinning. The primitive his concept of reduction was already seen in his earlier

concept of *the application of a relation* that contains *the first-order predicate logic with identity*.⁸²⁰ The concept of application can be explained through bonding or ion pairwise system “gripped his mind as an analogy he discerned between the physical composition of chemical icons by bonding and the logical composition”⁸²¹ This concept creates the primitive terms relation—*stand for*.⁸²² The first-order predicate logic is a formal system, which uses quantificational logic associated with sets and domain in general. Regarding the relation in case of this logic “the predicates are to be understood to denote or stand for relations defined on some non-empty set.”⁸²³ Peircean algebraic logic engaged in this logic primary as syntax. Peirce considered algebraic as language, thus the explanation of his logic is syntax of algebra. For the semantic aspect, Peirce differentiated syntax and semantics even so his logic invited the confusions between them. Peirce holds the concept of relation as relative relations. Between syntax and semantics “when semantics is extensional in structure and when the sense of word ‘denote’ is understood to be given by some interpretation function which connects syntax with this semantics.”⁸²⁴ I described the both function of interpretation at the extensional level and intensional level along with three levels of semantics. By having interpretation in between, syntax and semantics will be sustainable for their role each other. For that reason at the critical level of interpretation the notion of hypostatic abstraction must be addressed because the center of Peircean triadic mode—thirdness has to be involved in the process. Interpretation is the source of hypostatic abstraction and the essence of interpretation guided by hypostatic abstraction. Between both sides Peircean thirdness mode is involved. The notion of teridentity and thirdness mode relation must be focused for hypostatic abstraction.

The hypostatic abstraction works with the understanding of the concept of “degenerate” and “non-degenerate” that indicates the possible way to start analysis. First, I introduce

⁸²⁰ Burch, "Peirce on the Application of Relations to Relations," 206.

⁸²¹ *Peirce's Reduction Thesis: The Foundation of Topological Logic*, 3.

⁸²² *Ibid.*, 21.

⁸²³ "Peirce on the Application of Relations to Relations," 208.

⁸²⁴ *Ibid.*

Peirce's notions regarding adicity and the concept of degenerate following Burch. Peirce's Reduction Thesis is depending on positive and negative component of its reduction. "The positive component of the Thesis says that from relations of adicities (or: arities) 1, 2, and 3 exclusively, all relations—of all non-negative (and, of course, integer) adicities—may be constructed. Equivalently, it says that all relations of adicity greater than 3 may be reduced to relations of adicities 1, 2, and 3. The negative component of the Thesis says, first, that relations of adicity 2 may not *in general* be constructed from (reduced to) relations exclusively of adicity 1; and, second, that relations of adicity 3 and greater may not *in general* be constructed from (equivalently: reduced to) relations exclusively of adicities 1 and/or 2."⁸²⁵ Burch pointed out that "negative component" is more "finely-rained manner by making use of degenerated relation." The understanding of the concept of term *degenerate* and *non-degenerate* of adicity is one of the vagueness for Peircean Reduction Thesis. Burch explained both ways in PAL. Peirce's concept of degenerate is used by Peirce likewise: "first, that a relation of adicity 2 may be constructed from relations exclusively of adicity 1 if and only if the relation of adicity 2 is *degenerate*, second, that a relation of adicity 3 or greater may be constructed exclusively from relations of adicities 1 and/or 2 if and only if the relation of adicity 3 or greater is *degenerate*; and, third there do exist *non-degenerate* relations of all adicities ≥ 2 "⁸²⁶ This existence is proved through the characteristics of non-applicability to Cartesian Product by Burch.⁸²⁷ Careful analysis is of course is necessary. But, it is beyond this dissertation's limit regarding the subject of architecture. Frankly speaking, above notions are intended apply all cases of construction and reduction of adicity in terms of adicity 1, 2, 3, and more than 3. Any of the cases depends on the particular adicity which may be degenerate or non-degenerate, or positive and negative. The concept of degenerate and reversibly non-degenerate can be

⁸²⁵ "Peirce's Reduction Thesis," 234.

⁸²⁶ Ibid.

⁸²⁷ *Peirce's Reduction Thesis: The Foundation of Topological Logic*, 67-70. Burch proved the existence of non-degenerate relation which does not apply Cartesian Product in detail. According to him "an aspect of the negative part of the reduction thesis of his work, however, is the thesis that monadic and dyadic relations alone provide an insufficient basis for constructing all relations."

reached through the applicability and non-applicability to Cartesian Product that divides the adicity relations into more than two relations including 1, 2, 3, and more. That means the application of Peircean Reduction aimed to explicate all kind of relations through adicity 1, 2, 3, and more. In addition, the conditions are applied whether the adicity is degenerate in general or not general, non-degenerate in general or not general. The final part of above phrase with the possible existence of non-degenerate of all adicities ≥ 2 will further open, in a sense, the universality of relation adicity for possible relations. Also on the contrary, “there are indeed degenerate relations of all adicities greater than 1.”⁸²⁸ All in all regarding the adicity, reduction, and construction, I shall understand that all adicities are within the frame of relative relations that Peirce originally intended. And depending on the setting we will reduce and construct all relations. This is understandable in a sense literally the reason Peirce called reduction as “hypostatic abstraction.” Reduction is hypostatically should be made and that is related with mind associated because “Peirce’s full conception of a relation involves the ideas of a mind, a sign, and the ontological structure.”⁸²⁹ However, this reduction is not arbitrary at all and requires changing sense of the idea of reduction which makes better understanding of things relations than dyadic relation only that I described in the previous chapters.

The logical process of hypostatic abstraction can be explainable through operation associate with the concept of application on to the process of reduction with triadic adicity identity namely teridentity. Teridentity relation can be constructed by three monadic relations or one monadic and one dyadic relation.⁸³⁰ Burch “proved that a relation of adicity 2 is degenerate if and only if it is constructible by means of operations of construction ... from adicity 1,” and “a relation of adicity ≥ 3 is degenerate if and only if it is constructible by means of these operations from relations of adicities 1 and 2”⁸³¹ focusing on positive components of Reduction Thesis. In addition if negative components of Reduction Thesis are included, the possibility of unique relation without

⁸²⁸ "Peirce's Reduction Thesis," 242.

⁸²⁹ Ibid., 235.

⁸³⁰ Ibid., 242.

⁸³¹ Ibid.

having any construction will increase.⁸³² That means all relations are unique and cannot be reduced. I hold both possibilities regarding the uniqueness of architectural creation because I assume that in architectural language it is not necessary that all architectural components of language are to be reduced. Rather this proof is important because we have positive component for reduction that can be used to analyze architectural language based on PAL. Then, possibly we can reach closer level of architectural particularity in terms of architectural language.

Beside the crucial necessity of *teridentity*, for *hypostatic reduction* the need of operation includes COMMA, QUANT, HOOKID, and PRODUCT operator. “At the level of extensional semantics, the COMMA operator has the effect of doubling up the i^{th} entry of each n -tuples in the interpretation of R^n .” The R^n is given as “quantificational logic by $R(x_1, x_2, \dots, x_n)$ ” such as Primitive Terms. “Graphically, the COMMA operator is applied by attaching a spot of teridentity (by means of Join2) to the i^{th} hook of spot for R^n .”⁸³³ As the result COMMA operation increases one adicity. “The QUANT operator is a device for accomplishing in PAL what is accomplished in quantificational logic by existential quantification over a variable. Graphically, the QUANT operator is depicted by attaching a spot of teridentity (by means of Join2) to the i^{th} hook of the spot for R^n , thus: and then applying Join1 to the two open hooks a remaining teridentity spot.”⁸³⁴ As the result, QUANT operation decreases one adicity. “The HOOKID operator is a device for accomplishing in PAL what is accomplishing in quantificational logic by the identification of free variable.” It works as “a certain sort of multiple attachments to a graph of some n -adic identity relation.”⁸³⁵ It depicts certain identities which are specified by HOOKID operator such as HOOKID¹³⁵ in order to construct an accomplishment, in this case at first, third, and fifth adicity in PAL. “The PRODUCT operator is a device for constructing, for any array, of whatever Choris, a term of PAL

⁸³² Negative component of Peircean Reduction Thesis was proved by Burch. It said “starting from any relations exclusively of adicities 1 and 2, there are relations of all adicities ≥ 3 that cannot be constructed.” See *ibid.*, 243.

⁸³³ *Ibid.*, 244.

⁸³⁴ *Ibid.*, 245.

⁸³⁵ *Ibid.*

of Choris 1 that is equivalent to it.” It is beyond terms of Choris 1 and applicable for NEG operation.⁸³⁶ Hypostatic abstraction is proved by using above four major operations which derived from Peircean Logic and the two theorems including “Representation Theorem for PAL” and “Reduction Theorem for PAL.”⁸³⁷ Representation Theorem is explained as “well-formed formula of first-order predicate logic with identity.”⁸³⁸ It contains dyadic relations between well-formed formula and terms of PAL with respect of the translation between them. This dyadic relation is correlated in terms of adicity in order to make be dyadic identity. Then the translation will be appropriated with operations including HOOKID, QUANT, and NEG. HOOKID is used for re-identify matched variables to associate with NEG and QUANT operator with Teridentity.⁸³⁹ Reduction Theorem is critical and “based on the idea of Hypostatic Abstraction.”⁸⁴⁰ However, “there is not one form of hypostatic abstraction, but rather many forms.”⁸⁴¹ The reduction is literally hypostatically and strictly logically made without having arbitrary process. This keeps Peircean reduction applicable uniquely and universally satisfying both simultaneously.

The main logic of hypostatic abstraction for *interpretation* can be understood that “we replace a relation of adicity n with another: equivalent one, constructed out of one monadic relation, n dyadic relations, and $n+1$ occurrences of the triadic identity relation (teridentity) that serve to identify variables and to quantity existentially. What the Reduction Theorem shows is that this procedure may *always* be accomplish.”⁸⁴² Therefore, reduction is possible to monadic, dyadic and triadic exclusively. Teridentity

⁸³⁶ Ibid., 246., and See, *Peirce's Reduction Thesis: The Foundation of Topological Logic*. XX. Regarding PRODUCT operation proved.

⁸³⁷ "Peirce's Reduction Thesis," 246-51. For Representation Theorem, see *Peirce's Reduction Thesis: The Foundation of Topological Logic*, 93-103. And for Reduction Theorem see *ibid.*, 105-116.

⁸³⁸ "Peirce's Reduction Thesis," 246. And, see *Peirce's Reduction Thesis: The Foundation of Topological Logic*, 93.

⁸³⁹ "Peirce's Reduction Thesis," 246-47. The detailed explanation is available at *Peirce's Reduction Thesis: The Foundation of Topological Logic*, 93-103.

⁸⁴⁰ "Peirce's Reduction Thesis," 249. And see *Peirce's Reduction Thesis: The Foundation of Topological Logic*, 105.

⁸⁴¹ "Peirce's Reduction Thesis," 249.

⁸⁴² *Ibid.*, 250.

is critically and “inevitably will be involved in every case of reduction by hypostatic abstraction.”⁸⁴³ In this process PAL correspond to the well-formed formulae, and the unification of terms enterpretation ($*$ (R^n)) and domain D (described as $D \cup *$ (R^n)) can be defined with the construction of monadic relation (R^1) and n dyadic terms ($I_1^2, I_2^2, \dots, I_n^2$), and $n+1$ teridentity with the simplified format according to Burch. The critical issue is the occurrence of teridentity at the moment that enterpretation is made for the entire process of hypostatic abstraction. It is understandable with the normal sense as *Identity*. This identity has to be degenerate dyadic and triadic relation, and a monadic relation has to be involved. In case of *intensional* semantics in addition to these, the relation to possible world on the basis of Peircean thirdness mode is necessary according Burch’s PAL. Therefore, learning from hypostatic abstraction, things are constructed on the domain of possible worlds with monadic (that is thing itself), and dyadic identities (thing to thing defined relation), and triadic identities (special identity called teridentity). These conditions are always replacing with equivalent, and then we are able to continue the reduction. Therefore, reduction is not ending of definition. Rather through reduction the process of meaning clarification will be possible. The negative notion of reductionism is not the case of Peircean Reduction.

More rigorous theorem was proved by Burch for *intensional* reduction theorem. The formula of intensional semantics level hypostatic abstraction is as flowing:

$$\iota^+ [\text{QUANT}^1 \{ \text{HOOKID}^{1, 3, 5, \dots, 2n+1} [(n+1) \text{PRODUCT}(\mathbf{R}^1, I_1^2, I_2^2, \dots, I_n^2)] \}]$$

With the condition that “ ι^+ be the augmentation of ι by hypostatic abstraction with respect to the term R^n , with the primitive terms $\mathbf{R}^1, I_1^2, I_2^2, \dots, I_n^2$ being as specified in the definition of ι^+ . Then the relation $\mathfrak{R} = \iota(R^n)$ expressed on ι by R^n is also expressed on ι^+ .”⁸⁴⁴ One of the important issues is that hypostatic abstraction must be involved with new entities in order to make reduction. Burch explained that “hypostatic abstraction

⁸⁴³ Ibid.

⁸⁴⁴ *Peirce's Reduction Thesis: The Foundation of Topological Logic*, 114.

always introduces new entities (the obtaining of relations) onto the scene.”⁸⁴⁵ The component of this intensional hypostatic abstraction formula includes one monadic term R_1 , n dyadic identity $I_1^2, I_2^2, \dots, I_n^2$, and $n+1$ teridentity which is delivered from HOOKID operation and thorough Representation Theorem for PAL related to operation QUANT. Also, intensional Herzberger Theorem shows that “relation \mathfrak{R} is reducible to relations of adicities 1, 2, and / or 3”⁸⁴⁶ for intensional semantics level hypostatic abstraction. At extensional and intensional both level hypostatic abstraction is applicable in order to make Peircean way of reduction by which any relation can be reducible to the relation of adicity 1, 2, and 3 exclusively. That is, according to Burch, positive component of Reduction Thesis. The thirdness involvement requires the negative component of Reduction Thesis. My intention to apply to a language of architecture will take this position in the end for the analysis of architectural language system interpreted by Peircean way.

In order to accomplish an entire vision of hypostatic abstraction, theoretical implication regarding the existence of *non-degenerate* relation at any adicity must be considered regarding Peircean notion of thirdness with respect to the relation to the notion of *teridentity*.⁸⁴⁷ The existence of *non-degenerate* relations was proved as the negative part of hypostatic abstraction by Burch. In PAL this existence allows to have a unique existence of relations at any adicity value and non-reducible in the general sense but not in the Peircean sense involving the notion of thirdness. For PAL thirdness involvement is assumed at any point of process of hypostatic abstraction with individual case according to Burch. Therefore, the involvement of thirdness is not necessary to be understood as a negation of the process of hypostatic abstraction, rather it should be extended to the metaphysical aspect of Peircean semeiotic.⁸⁴⁸ For the involvement of

⁸⁴⁵ Ibid., 113.

⁸⁴⁶ Ibid., 114.

⁸⁴⁷ Ibid., 117-22.

⁸⁴⁸ Ibid., 117. According to Burch, “thirdness is involved in any operation or procedure, for example a constructional operation or a definitional procedure for obtaining relations from other relations, such that, if the operation or procedure were formalized in PAL, its definition would have to presuppose the

thirdness for teridentity, I recall the notion of *interpretant* in order to highlight the characteristics of its shifting modes. *Teridentity* is not just the combination of dyadic relations which consists of two degenerate dyads.⁸⁴⁹ The structure of teridentity is not mere combination of binary identity as “Peirce explicitly noted that ‘teridentity cannot be formed out of binidentity’ ...” and there is a possible limitation in terms of existential graphs expression.⁸⁵⁰

However, Peirce’s notion of *genuine* relation of adicity and the connection to *interpretant* may provide the possible guidance to truer understanding of Teridentity. Peirce introduced the distinction between *degenerate* and *genuine* in terms of the category of third “to account for triads that were definable in the algebra but did not fit his third category.”⁸⁵¹ The *genuine* can be understood as equivalent or at least can share the characteristics, and may belong to *non-degenerate* relation, which is described in PAL. In other words, *genuine* is particularly can be said only for monadic, dyadic, and triadic irreducible categories, while *non-degenerate* can include these three categories and higher adicities not from Cartesian Product.⁸⁵² Regarding the difference between genuine and degenerate, “genuine triads are irreducible and the basis of all higher n-adic,” therefore, all degenerate n-adic can be reduced, and these triads contain more than a 3-tuple—triads consist of more than three things, while the degenerate triad is “mere

availability of at least one non-degenerate triadic relation.” Thirdness involvement can be any stage and any part of system.

⁸⁴⁹ Brunning, "Genuine Triads and Teridentity," 252-63. Brunning described three points regarding the relevant mode of Peirce’s Teridentity: (1) the use of existential graphs that make possible to make representation of triad, (2) “teridentity is required for the expression of Boolean product as a case of relative product, (3) “teridentity is definable in the algebra. However, according to him “Peirce ... became convinced that that true nature of triadic relations was often masked by the algebras.” See *ibid.*, 254.

⁸⁵⁰ *Ibid.*, 257. Teridentity structure is explained by Brunning through Peirce’s original concept that its structure is different from that of combination formed merely by identity and identity. He explained that teridentity theorem regarding the part of existential graphs based on “first order predicate calculus with identity” that consist of “theorem isomorphism ... a weak condition and the structure embedded in the graphs make this a very different system.”

⁸⁵¹ *Ibid.*, 255.

⁸⁵² Burch, *Peirce's Reduction Thesis: The Foundation of Topological Logic*, 67-70. Burch explained that possible existence of not degenerate relations which is not form Cartesian Product. Thirdness involvement with non-degenerate relation is discussed after this non-degenerate relation.

combination” and “mere juxtaposition”⁸⁵³ which are the result of operations that is the “mode of combination.”⁸⁵⁴ The possibility of the existence of teridentity through thirdness is necessary beyond the function of degeneracy—mode of combination.⁸⁵⁵ The linkage between genuine and non-degenerate relation would be extension to metaphysical relations, which Peirce described as metaphysical category of Thirdness. The metaphysical aspect of teridentity can be traced in the characteristics of interpretant along with Peirce’s triadic theory of category, which involve notion of interpretant. Interpretant is *representamen* and another sign that works in the mode of thirdness. Peircean notion explains kind of Peircean hierarchy system of interpretant that forms three classes of interpretant including *immediate interpretant*, *dynamic interpretant*, and *final interpretant*. These three different interpretants engage the shifting modes of Peircean semeiotic as I described in the previous chapters (Chapter VI and VII). The invitation of new entity is critical for the process of hypostatic abstraction and it would be relevant to the role of interpretant as representamen and as another sign. In the case of extensional level, I discussed the notion of *tripartition* that can be extended towards the level of *interpretant*. That is the case of enterpretation and formal system of architecture. The involvement of thirdness for teridentity appropriates the process of new entity in order to process Peircean way of reduction (the clarification of meaning), while teridentity may require the role of interpretant in order to shift its modes among immediate, dynamic, and final within the mode of thirdness. This is the intensional level of interpretation with whole version of hypostatic abstraction. The simplified model of hypostatic abstraction in PAL for the configuration of the basic model to interpret an architectural language by Peircean way can be defined following:

(1) *All relations architectural formal entity can be reduced to degenerate dyadic identity and triadic identity (called teridentity, non-degenerated if thirdness involvement*

⁸⁵³ Brunning, "Genuine Triads and Teridentity," 255.

⁸⁵⁴ Ibid.

⁸⁵⁵ Ibid. Jacqueline Brunning explained the essential limitation and difference from non-degenerate (genuine). “Degeneracy is a function of the mode of combination. ... All of the degenerate triads are formed by operations of different algebraic type.”

available), and monadic identity. (For an extensional level—formal system of architecture)

(2) Relations can be reduced by hypostatic abstraction (Peircean reduction) into monadic, dyadic, and triadic non-degenerate entities, while introduction of these new entities involve the Peircean thirdness which is supported by the process of shifting in terms of mode of interpretation. (For a shift from extensional to intensional—shift from physical (formal system) to metaphysical (meaning of architecture) level)

(3) Peircean interpretation of an architectural language through hypostatic abstraction takes the process of thirdness mode that will be sustained by new entities including monadic architectural identity, dyadic architectural identity, and triadic architectural identity (corresponding to Peircean teridentity). This process is associated with shifting process of interpretants.

VIII.1.10 Architectural Language Model with Peircean Hypostatic Abstraction

In this section, I will apply the above simplified hypostatic abstraction model to architectural language. The component of this specification model will be analyzed by various architectural languages with Peircean way including (1) three classes of identity in formal system, (2) reduction process with new identities as meaning generation, (3) thirdness involvement with meaning clarification.

The final part of the conceptual model of PAL adapted to a Peircean way of language of architecture was squeezed out the critical essence of the truer understanding of hypostatic abstraction with the involvement of thirdness mode. Especially the understanding of true meaning of notion of teridentity is crucial in order to construct an architectural model of ‘hypostatic abstraction’ that can be examined the coherence of model assumption through the following section’s case study. Regarding the three classes of identity in formal system, an architectural identity of formal system can be defined only if architectural system is an autonomous system—extensional semantics. Otherwise, the model would be for an intensional interpretation that triggers mental

involvement through an appreciation of architecture. The classification of three identities within a formal system is plausible to correspond to the analysis of interpretation level semantics entities, which includes (1) identity depiction of taxis, (2) identity representation of genera, and (3) identity expression of symmetry. These above classifications are deeply associated with the systemic application of formal system of tripartition. With the relation to tripartition, taxis are tripartition by itself. That is *monadic identity* and identity depicts itself. This is a sort of formal system origin to start any formal allocation. This origin was not to be questioned by the form of classical architecture. Postmodern architecture, especially poststructuralist architecture such as Deconstructivist movement and style questioned with its theoretical underpinning of deconstruction—Derrida's philosophy.

The relation between tripartition and genera creates architectural formal hierarchy system within the mode of *dyadic identity*. This relation is populated all architectural formal system with the rule of analogy and comparison. Taxonomy of genera with the combination of systematic rationale fulfills the requirements of the relation between tripartition and genera. Because of taxis-tripartition relationship, systematically the composition of genera is fulfilled with material and formal allocation in its system. Postmodern architecture, both scenographic and contextual architecture challenged authenticity of architectural form, materiality, and configuration in order to express alternative ways of pluralistic expression of architecture. Scenographic architecture challenged authenticity of architectural form with the disconnected form-materiality relations. Contextual architecture diversified architectural adaptation that intakes surroundings within architectural formal system and the value of materiality. This tendency is an opposition to that of scenographic architecture, but they share the needs of challenge made by postmodernism of architecture. They both worked against authoritarian of determinism by the expression and unification of otherness inclusively. The mode of genera is a representation that is dyadic identity within the formal system of architecture.

Architectural components arranged by the symmetry articulate formal systems between map and figure. This totalizing system of architectural form is the role of *expression* in the mode of *triadic identity*. The system of map and figure creates the meaningful units with rhythm and with the appropriate treatment of rhetoric. Symmetry is relations and balance, but the layers of the relation consist of map and figure provides more complexity of the balance even including repetition and contradiction of formal system along with the architectural formal array. Like Robert Venturi, in postmodernism architecture enhanced this architectural complexity in order to express the emphasis of the mannerism of contradiction in architecture. Symmetry engagement is not limited within the formal system of architecture itself. It does include surroundings and context of architecture. Therefore, critical approach to environments is inevitable while keeping the architectural autonomous system's integrity. This approach and movement shares the principle of phenomenology and critical regionalism of architecture. The formal system of tripartition is integrated with layers of symmetry so that the architecture can be articulated in higher complexity with simultaneous contradiction. Mannerism, Baroque, and Rococo styles are exemplified as the means of expression of this kind of contradiction by Venturi, because he preferred not to use formalist expression but representation mode. Conclusively the mode of symmetry is expression of formal system of architecture. This is relation of relations that is *triadic mode of expression*.

Intensional level of identities including monadic, dyadic, and triadic mode has to be engaged with the view of possible world with the interaction between formal system and mental activity. In that sense postmodernism architecture challenged the formal system described in the previous paragraph is possibly the examples of intensional level of identity. In other words, Peirce's secondness mode is associated with the experience which causes mental activities with some level of resistance as I described in the previous chapter regarding Peircean semeiotic and his philosophy (Chapter VI – *Peircean Semeiotic and Semantic Logic*). Interpretation is the result of the engagement of mental interaction between formal system and interpretant. In short, this is over all relation between tripartition and interpretant that I described in the Chapter VII

(*Peircean Postmodern Architecture*). Therefore, intensional level monadic, dyadic, and triadic identity are plausibly represented and coincided by the activities of postmodernism architecture. By setting this paradigm, I will discuss these three categories of identities through postmodernism architecture for the purpose of this dissertation – Peircean interpretation of Postmodern Architecture.

Poststructuralism philosophy argues traditional logocentrism with the notion of interplay regarding the origin of location which is no existence of actual center. Architectural Deconstructivist took this notion in order to express their style, which deforms the axial direction in horizontal vertical both. The dimension of tripartition cannot be traced with hierarchical structure as a whole because origin point is always dislocated. Only we can do is to trace origins' dislocation not of the hierarchy of structure because hierarchy itself changing its form and therefore it is intractable. Its structure is condensed and simultaneously dislocated. The aspect of deconstruction triggers discomfort against normal feeling so that its form generate new way of seeing the distorted form of architecture as new version of experience through way of deconstruction—dismantling illusion. This process is explained as survival aesthetic experience and hedonic adaptation in Chapter VII – *Peircean Postmodern Architecture*. But this style evokes new iconicity of architectural style with the realm of scenographic and psychoanalytic foundation that mental capacity follows depiction of sequential experience. Therefore, intensional level identity is satisfied with this evolving new identity as monadic characteristics.

The relations between genera and tripartition would be compositional and material allocation specific in extensional level—formal system of architecture. Scenographic postmodernism architecture intended to be anti-authentic formal inventor by provoking the use of classical vocabulary of architecture. With regard to an intensional level, the notion of tripartition will be transmuting toward the role of interpretant. Physical aspect of tripartition and that of metaphysical is ready to be synchronized through domain of possible world. Pluralistic view of architecture allows inventing a free style that departs

from materiality. This disconnection in a sense promotes iconic aspect of style, but essentially, it is about the relation between genera and tripartition that is dyadic mode. Therefore, iconic aspect is only the relation between sign and sign object relation. It is far from complete single mode of identity like tripartition by itself. Contextual architecture values materiality and surroundings of architecture through embodiment of these values. The interpretation semantics of this style is, therefore, a representation that permutes inside and outside. Ando's work expresses enclosed garden with openness towards environment and surrounding environment is embedded in his formal system. Both scenographic and contextual architecture are for or against subject to cultural matter. By taking existing culture, context, vocabulary, and ultimately surroundings into a body of architecture interpretation must organize its semantics to communicate with these objectives. In the bottom of its syntax, the mode of representation is playing the role of dyadic characteristics.

Identifying architectural teridentity (triadic identity) is about expressing a total system of architecture. Peircean notion of triadic relation is more than tree things relation. In PAL it is corresponding to this notion as non-degenerate triadic relation that composes more than three adicity relation. In architecture this aspect should be applied to the level of symmetry in case of formal structure of architecture. Through teridentity intensional semantics of PAL involves mental activity projected on the form of architecture. At the level of symmetry intensional semantics generates interactive phenomenon between form and mental schemata in order to uphold the multi-layered and controversial architectural meaning of expression. When we focus on the architectural expression within local level there is contradiction and complexity, but we leave further distance and our mental capacity refocus the attention at the level of totality, then this contradiction turns to a higher level of symmetry and a harmonized asymmetry. This kind of synchronization between parts and whole was discussed by many architects such as Venturi. The system of tripartition is woven like hyper linkage beyond layers, and between foreground and background. Venturi describes the dynamic relation between parts and whole with his term "*inflection*." "*Inflection* in architecture is the way in which

the whole is implied by exploring the nature of the individual parts, By inflecting toward something outside themselves, the parts contain their own linkage: inflected parts are more integral with the whole than are uninflected parts. Inflection is a means of distinguishing diverse parts while implying continuity. ... The inflected element can be called a partial-functioning element in contrast to the double-functioning element.”⁸⁵⁶ His explanation contains characteristics of the notion of tripartition as form and the notion of dynamic interpretant as mental integration with form. Inflected parts are making own relation and distinguishing by self and in the same time creating continuation as a whole. His notion of double-functioning is dyadic explanation of contradiction where inflection is more toward multiple relations that create ‘*multi-adic*’ relation. The simultaneity of inflection and double-functioning has to be taken as a system that makes architectural rhetoric that can be seen in Baroque architecture.⁸⁵⁷ In that sense, double-functioning implies dyadic relation projected on possible worldview while inflection would be that of triadic which consist of parts. Venturi called “a partial-functioning element.” This partial can be created with the system of tripartition to form monadic unification and can be projected on possible worldview. Dynamic interpretant will shift to final interpretant when the totalized system such as symmetry is achieved after concurring controversial phenomenon of appearance of a form of architecture. Symmetry can resolve a contradictory duality because of the effect by inflection.⁸⁵⁸ This effect involves triadic relation ‘teridentity’ and ultimately ‘hypostatic abstraction.’ Therefore, symmetry of architecture plausible to take irreducible monadic, dyadic, and triadic entities projection onto the possible worldview at the level of intensional interpretation in order to express meaning of architecture. This is the effect of final interpretant which involves ‘hypostatic abstraction’ with the mode of thirdness—true teridentity.

⁸⁵⁶ Venturi, *Complexity and Contradiction in Architecture*, 88-90.

⁸⁵⁷ Ibid., 40. Venturi explained that “The rhetorical element, like double-functioning element, is infrequent in recent architecture. ... But the rhetorical element is justified as a valid if outmoded means of expression. ... Much of the function of ornament is rhetorical - like the use of Baroque pilasters for rhythm,”

⁸⁵⁸ Ibid., 94. “Inflection accommodates the difficult whole of a duality as well as the easier complex whole. It is a way of resolving a duality.” Inflection plays the role of monadic parts and triadic whole.

As the key aspect of an interpretation of architecture in Peircean way, above three modes of identities must be structured focusing on the notion of **hypostatic abstraction** following the logic of PAL and semeiotic philosophy of Charles Sanders Peirce. The critical consideration is that PAL is developed based on quantificational theory and the first-order predicate logic with identity. This logic is based on isomorphism that limits Peircean philosophy.⁸⁵⁹ The need of Peircean notion of thirdness involvement is explicitly proclaimed by Burch at any process and level of his hypostatic abstraction logic. As he explained the importance of teridentity among other relations, which correspond with monadic and dyadic relation within the process of Peircean reduction theory, is the key in hypostatic abstraction. Above conjecture can be held for the purpose of Peircean interpretation of architecture only if the non-degenerate identity relations are met including monadic identity, dyadic identity, triadic identity (teridentity). And the involvement of thirdness mode in this reduction is necessary approach to theorize hypostatic abstraction model for architecture. In the previous paragraphs, all of these identities in architecture are developed with the coherent analogical explanation between PAL and theory of architecture.

Monadic architectural identity is strongly associated with the notion of tripartition at the formal level and immediate interpretant of semeiotic. The tripartition is taken as origin in architecture that defines the holistic guiding system of formal system in architecture. I described the necessity of tripartition beyond style in the Chapter VII (*Peircean Postmodern Architecture*) in order to configure architectural system guides an entire formal organization of architecture. This guiding system of architecture is suitable to link with monadic mode of identity that immediately depicted by mind operation projected on worldviews. Tripartition of formal system is depicted as a sequence of mind tracing led by hypostatic abstraction process. The meaning clarification of architecture

⁸⁵⁹ Brunning, "Genuine Triads and Teridentity," 257. Regarding Peircean teridentity Brunning describes the first order predicate calculus with identity is the theorem of isomorphism that is "a weak condition and the structures embedded in the graphs make this system a very different system." Peircean existential graph is more appropriate to his original philosophy of teridentity than isomorphism theorem according to Brunning.

for depiction comes with this monadic identity—tripartition. In order to satisfy this clarification, Peircean reduction, the process requires certain set of identities including monadic, dyadic, and triadic identity. Through tripartition architectural monadic identity will be provided. This monadic principle contains possibility, and essentially defines the quality of architectural configuration which is not limited as visual aspect rather should be concerning ethical characteristics of architecture.

Dyadic architectural identity is a foreground of architectural forms that define the mode of hierarchy of genera sustained by mode of tripartition. This mode of identity semantically represents a formal system of architectural elements. In case of classical architectural formal system, hierarchical system genera guided by tripartition system is formalized in order to create dyadic relation between forms of architecture and between form and mental integration. The way to perceive these relations the engagement of dynamic interpretant is inevitable with dynamic shifting process for the process of meaning clarification through hypostatic abstraction. For the authentic classical form of architecture this shifting mode is relatively fixed range while postmodern architecture explicitly prefers wide range of shifting. In case of scenographic architecture, a classical form of vocabulary is transformed with ignorance of materiality, and dislocated with the isolation from the contextual frame of history regarding style. For contextual architecture representation of context within a body of architecture is a critical approach to realize autonomous form of architecture. The outer world context and the inner autonomous system of architecture create critical representational process. In both cases of postmodern architecture dyadic mode of identity directly causes formal configuration with selection and representation of form in order to satisfy intensional level of semantics which is guided by dynamic interpretant, shifting tripartition. For the process of architectural hypostatic abstraction new set of these dyadic identities contribute to the meaning clarification.

Triadic architectural identity (teridentity relation in architecture) is the key for the process of hypostatic abstraction in architecture. Thirdness involvement is critical for

the process of Peircean reduction, hypostatic abstraction at any process and entirely or partially in case of PAL. Architectural hypostatic abstraction follows this model. We understand that the teridentity in PAL is not just the combination of two dyadic relations by recalling the notion regarding limitation and characteristics of the first order of predicate theory and isomorphism quantificational logic structure. The truer structure of teridentity requires thirdness involvement. Therefore, dealing with teridentity with mode of thirdness coincides with the satisfactory condition of the involvement of hypostatic abstraction with the mode of thirdness. Mode of thirdness must concern beyond individual component of architecture to express holistic architectural experience. According to Peirce “the third category of elements of phenomena consists of what we call laws when we contemplate them from the outside only, but which we see both sides of the shield we call taught.”⁸⁶⁰ The thirdness involves our mind, which is described as thought and laws. Peirce differentiate law from facts; he explained as the “collection of facts [that] can constitute law” which “shall be characterized” not as facts but with the “potential world of quality,” and “potential world of action.” Therefore, in the mode of thirdness the involvement of our mind as thought is inevitable, and ‘laws’ are collection of thoughts beyond individual fact and action.⁸⁶¹ Because factual domain is secondness, thirdness must synthesize individual facts; while thirdness holds shifting phenomenon between firstness characteristics in potentiality and quality, which holds the relationship to the notion of ‘potential worldview’ that construct intensional semantics of PAL. The consisting relations of identities of monadic, dyadic, and triadic must be all non-degenerate. These kinds of relations are irreducible and unique. The characteristics of thirdness requires ‘shift’ between monadic, dyadic, and triadic, and controversially contribute to the formation of law that implies the constitution to a truth finding.

For the clarification of categories for thirdness the original Peircean semeiotic can be an aid to describe its complexity. Peirce described division of signs with ten classes of designation of sign. In the realm of thirdness he categorized *Legisign*, *Symbol*, and

⁸⁶⁰ Peirce, *Collected Papers of Charles Sanders Peirce*. (CP 1.420)

⁸⁶¹ Ibid.

Argument. Legisign belongs to ‘of representamen,’ Symbol is that ‘of relation to object,’ and Argument is ‘relation to interpretant.’ The exhibited relation of influences in the ten categories are (I) Rhematic Iconic Qualisign, (II) Rhematic Iconic Sinsign, (III) Rhematic Indexical Signsign, (IV) Dicent Indexical Sinsign, (V) Rhematic Iconic Legisign, (VI) Rhematic Indexical Legisign, (VII) Dicent Indexical Legisign, (VIII) Rhematic Symbolic Legisign, (IX) Dicent Symbolic Legisign, and (X) Argument Symbolic Legisign.⁸⁶² For Legisign the influence can be made to Icon, Index, and Symbol. For Symbol the influence from Legisign, and to Rheme, Dicent, and Argument, Regarding Argument the influence is from Symbol. Between these influences the metaphysical aspect of thirdness should be understood to make a process of shifting among monadic, dyadic, and triadic identity.

If the thirdness involvement in hypostatic abstraction is understandable with above metaphysical shifting, the layout of hypostatic abstraction model in architecture can be drawn by specifying architectural version of Legisign, Symbol, and Argument. The characteristics of Legisign can be understood from three of the influences of ten categories stated above including *Rhematic Iconic Legisign*, *Rhematic Indexical Legisign*, and *Dicent Indexical Legisign*. The commonality of those is the idea of “general type or law”⁸⁶³ respectively in a *diagram*, *demonstrative pronoun*, and *street cry*. These are relevant to singularity of object and particularity of event under the lawful guidance which “signify information” or “denote the subject of information.”⁸⁶⁴ Therefore, the common characteristic of Legisign can be understood as lawful origin which can be a guide such as taxis in the formal level. *Tripartition* can be the origin of this aspect and monadic identity with thirdness is characterized following this aspects. The characteristics of symbol can be read from Rhematic Symbol and Dicent Symbol which are common to “image in the mind,” “mind to give rise to a General Concept,”⁸⁶⁵

⁸⁶² Ibid., (CP 2.264)

⁸⁶³ Ibid., (CP 2.258-260)

⁸⁶⁴ Ibid., (CP 2.260)

⁸⁶⁵ Ibid., (CP 2.261)

and “a sign connected with its object by an association of general ideas.”⁸⁶⁶ This is about the connection of mind to sign object for the general concept. Therefore, the common characteristic of symbol is to indicate the relation between sign object and mind that is concept and clear image. In architecture, the formal units such as general indicate clear relation between mind and architectural sign objects. Thus, dyadic identity with thirdness such as symbolic formal treatment in architecture follows this significance. Lastly, argument is traced by tenth category, which is “a sign whose interpretant represents its object as being and ulterior sign through a law,” and “conclusion tends to be the truth.” But, “argument must be a Symbol” and also “must, further, be a Legisign.”⁸⁶⁷ Therefore, argument is through interpretant guided to the lawful conclusion, and singularity of expression. Argument takes format of text and this text as singular sign object expresses meaning. The semantics of architecture expresses a metaphysical meaning with the process of hypostatic abstraction with thirdness, then symbolized and reduced as singularity changing monadic mode of being as a whole. In architecture, this phenomenon is made by the holistic way of configuration of architecture including contradiction and complexity of architecture. This aspect of architecture is such as the case of symmetry. We must recall the notion that in PAL hypostatic abstraction requires new entities in order to precede the reduction, meaning clarification and accept that architectural hypostatic abstraction follows this logic. Thus, **triadic identity of architecture** (teridentity of architecture) with non-degenerate relation, which is metaphysical, can be constructed configuration of multiplicity and multilayer, and simultaneously it generates singularity of architecture by shifting modes when new entities are invited.

Therefore, hypostatic abstraction with thirdness involvement in architecture is constructed as simplified model of PAL in the following:

⁸⁶⁶ Ibid., (CP 2.262)

⁸⁶⁷ Ibid., (CP. 2.263)

(1) *In Architectural semantics the guide of monadic identity depicts the sequence of formal units of architecture, dyadic identity represents the units of architecture, and triadic identity expresses the multiplicity of configuration.*

(2) *All relations of architectural entity can be reduced to non-degenerate dyadic identity (such as genera) and triadic identity (called teridentity, such as formal configuration), and non-degenerate monadic identity (origin and lawful guidance of architecture such as taxis and tripartition).*

(3) *The thirdness involvement to architectural hypostatic abstraction shifts identity between monadic, dyadic and triadic while introduction of these new entities involve the Peircean thirdness which is supported by the process of shifting in terms of the mode of interpretant.*

VIII.2 Application of Case Study in Architecture

VIII.2.1 General Guideline of the Application of Case Study

The case study application takes the form of multiple-case studies with qualitative analysis concerning the Peircean interpretation of hierarchical, non-hierarchical (heterarchical) architectural elements, and components in (1) scenographic postmodern architecture, and (2) contextual postmodern architecture. Scenographic architecture is represented by figurative architecture, eclectic architecture, and historicism architecture. In this case study, contextual postmodern architecture includes neo-rationalism, and critical regionalism architecture. Analytical model of Peircean interpretation of architecture provided the schematic guideline in Section One – Conceptual Model in Peircean Logic. The application of this model to the actual architectural projects' case study has the following purposes to determine: (1) the affectivity of tripartition of architectural formal system for postmodern architecture, (2) the three levels of semantics in interpretation (extensional semantics), and (3) the three levels of semantics in interpretation (intensional semantics). These three levels of semantics are categorized as (1) depiction, (2) expression, and (3) representation. To facilitate the application of case study of actual architectures, I provide the **four propositions**: (1) there is an extensional

semantics of architecture through formal system following the base of classical architectural formal categories; (2) there is an intensional semantics following three levels of role, associated with Peircean semantics model; (3) the language model of architecture is recognizable in a result of the deduction of manifold entities of extensional and intensional semantics; (4) Peircean semantics signify the reduction of the characteristic of postmodern architecture. These four main propositions are aimed to meet the goals that prove the effectiveness of the Conceptual Model in Peircean Logic in the following steps: (1) Identifying the tripartition in the three level of architectural formal system (extensional semantics in architecture) that is specified as (i) taxis, (ii) genera, and (iii) symmetry; (2) identifying the three levels of Peircean Semantics interpreted on architectural forms and the meaning to associated with it on the both levels of semantics including extensional and intensional semantics; (3) demonstrating the three levels of tripartition and the three level of semantics with respect to the construction and process of hypostatic abstraction (which includes architectural identities generative and dynamic processes); (4) characterizing postmodern architecture in terms of Peircean interpretation.

Architectural formal system and the understanding of perceivers mind has to be established as a meaningful relationship. For this task, Step (1) and (2) contribute to the identification of this relationship through tripartition system of architectural form and Peircean semantic systems (in both extensional and intensional system). The system of tripartition penetrates all three level of architectural formal system including taxis, genera, and symmetry. With regard to the characteristic of formal tripartition, the role of *interpretant* of triadic Peircean semantics establishes bridges between mere formal semantics level and that of mental associated semantics level. The identification of formal entities and their relations to perceivers' mental involvement creates meaningfulness of architecture. Along with the PAL conceptual model, architectural formal entities, elements, and arrays need to be determined within the scheme of selected architectures.

In the step (3), I approach to analyze the construction and process of formal perception through how tripartition and three levels of semantics are triggered by the event of hypostatic abstraction. The form of tripartition is not a simple collection of tri-parted segments. It is rather a made of complexity in relations that specify formal system of *hierarchy* in case of linier relationship and *heterarchy* in case of non-linier relationship involving perceivers' mental capacity. The level of these complexities in perception is defined by the condition of hypostatic abstraction. The reduction through hypostatic abstraction specifies the three special relations in PAL. The result of reduction consists of one monadic relation, dyadic identity, and triadic identity (teridentity) according to PAL. This case study adopts this theoretical insight as monadic architectural identity, dyadic architectural identity, and triadic architectural identity. I intend to identify these three categories of architectural identity. In the previous chapter I summarized these three modes of architectural identity: (1) monadic architectural identity is theoretical identity such as with modernist view of metaphor; (2) dyadic architectural identity represents relation of oppositions and the solvable disjunctions through deeper interior experience; (3) triadic architectural identity is a cultural-form that is parallel to architectural space and architectural language between identity, and the process of cultural exchange. More succinctly, monadic architectural identity is a mode of rationale; dyadic architectural identity is a solution of conflict; and triadic architectural identity is a process of generalization through architectural language. The notion of shifting plays the role to explain the mechanism of three modes shifting of interpretant that consists of shifting between immediate, dynamic, and final interpretant. In the case study these shifting perceptual involvement need to be identified. Then, the notion of architectural hypostatic abstraction will be explainable. Shifting the modes of interpretant we would have opportunity to introduce new entities of hypostatic abstraction in PAL. For that sense, described architectural identities above including monadic, dyadic, and triadic would have partially new or entirely new sets of identities. When this happens hypostatically, new entities would be working as the process of Peircean reduction, hypostatic abstraction for architecture. Peircean relativity structure

of interpretant described in the Chapter VI – *Peircean semeiotic and logic* can be a theoretical development. Shifting modes of interpretant may be related with the process of replacing the entities of monadic, dyadic, and triadic with relativity structure. This structure can be a combination of hierarchy and heterarchy both. In addition to theory of PAL, supplemental theories regarding the notion of shifting will be utilized for this explanation. These supportive theories are from the notion of survival aesthetics and the notion of hedonic adaptation. I intend to analyze the cases from two directions including hypostatic abstraction (three modes of architectural identity), and these supportive theories (psychological approaches). In Peircean semeiotic the engagement of psychology is the key to understand modes shifting between two modes and among three modes.

In the step (4), I intend to deduce the characteristics of cases, architectural project. This process leads to prove the validity of case study. Hypothetically, I set two categories of postmodern architecture: (1) scenographic postmodern architecture, and (2) contextual postmodern architecture. By applying Peircean interpretation of postmodern architecture, I intend to articulate the significant characteristics of these two gropes by specifying the relation and patterns of the relationship between formal system and semantics matrix (depiction, representation, and expression). From analytical points this matrix should contains two layers of consideration that limits the biases resulted from the particularity of project (project specific) to understand the general characteristic of group (group specific). Therefore, the outcome of the matrix should include these aspects of parameter.

VIII.2.2 Selection of Research Contexts, Cases, and Data

The selection of cases and data is from architecture and projects categorized as postmodern style. Targeting the analysis of formal system and that of perceptual relationship in postmodern architecture through Peircean interpretation, the case study has four contexts that are composed of four architects. Each context has two cases. Each case's unit of analysis consists of extensional and intensional semantics by following the previously described general guideline including the four research propositions stated

above. Four contexts, architects include scenographic postmodern architecture that include the work of Michael Graves and Arata Isozaki, and contextualism architecture that includes the work of Robert Venturi, and Mario Botta. For each context, two multiple cases (buildings) are selected designed roughly between 1970s and 1980s. Interestingly, all of them were influenced by Italian culture and architecture more or less. Perhaps, this origin is the influence from work of Andrea Palladio as a revival movement, and the influence from Italian rationalism such as Aldo Rossi through, for example, Milan exhibition on 'Rational Architecture' that includes work of The New York Five.⁸⁶⁸

Michael Graves (born 1934) is one of the representative architects of postmodern style. He was a member of 'The New York Five' who contributed to the development of new trends after modernism architecture in the U.S. There is a possibility that Graves was influenced by classicism and neoclassicism style during his education in Italy. The trend of 'The New York Five' was influenced by Le Corbusier such as work of Richard Meier. But, Graves started pursuing his own style development in early 1970s. The tendency of his work was changed in the mid-1970s by associated with the reformation, adaptation, and exaggeration of classical form of architecture. His work was explained as figurative architecture by him.⁸⁶⁹ The selected cases are: (1) Humana Corporation Medical Headquarters (Kentucky, 1982-86), and (2) The Dolphin and Swan Hotels (Florida, 1987-90). His design consideration of regionalism and scale shifting are analyzable through these cases. His work has strong characteristics of scenographic postmodern architecture.

Arata Isozaki (born 1931) studied under modernist Kenzo Tange in Japan. He gained his popularity in Japan, Europe, and the U.S. In the 1980s, his work showed strong inclination to the mannerism of classical architectural vocabulary. From modernist to postmodernist his shift can be traced from his changing architectural vocabulary and

⁸⁶⁸ Mallgrave, *Modern Architectural Theory: A Historical Survey, 1673-1968*, 414. Milan exhibition in 1973 was involved with Tafuri and Rossi that made a result in the work of New York Five.

⁸⁶⁹ Graves, "A Case for Figurative Architecture," 11-13.

organization. He used abstract form with Palladian motif in the 1970s. His abstraction was shifted to classical form adaptation and its deformation that showed the characteristics of scenographic postmodern architecture in the 1980s. The selected cases are: (1) Tsukuba Civic Center (Japan, 1980-83), and (2) Museum of Contemporary Art (Los Angeles, 1982-86). His design methodology that quotes Italian Classical vocabulary is analyzed along with cultural identity that requires the juxtaposed western-eastern style as pluralism.

Robert Venturi (born 1925) developed the notion of complexity and contradiction in architecture, and architecture as sign that follows mannerism architecture. The influence of Italian mannerism in the 16th century contributed to his theoretical inclination to the complexity of language of architecture. His notions and insight represent the major criteria of critiques on postmodern architecture. His consideration about vernacularism of American cities in popular culture environment that accepts existing city context developed contextualism architecture as well as scenographic aspect in addition to the traditional mannerism view. Venturi plays a pivotal role between scenographic and contextual postmodern architecture. The selected cases for him are: (1) Vanna Venturi House (Pennsylvania, 1963-65), and (2) Sainsbury Wing, National Gallery Addition (London, 1987-91). I intend to analyze and interpret the distortion, permutation, and rhetoric in his architectural language through Peircean theory.

The work of Mario Botta (born 1943) is described as neoclassicism, new classicism, and neorationalism architecture. He received the combined influence of Le Corbusier (1887-1965), Louis Kahn (1901-1974), and Carlo Scarpa (1906-1978). His design demonstrates an Italian influence through his education in Italy, although he is referenced as a Swiss architect because of his birth location, Ticino (southern Switzerland). His combined design characteristics of neo-rationalism tradition, called *Tendenza* and the vernacularism can be seen in his work. Botta's formal system is essentially typological. But, his system is intended to have more distortion from rational form with the association of natural environment and culture in Ticino, Switzerland. He expresses the

contrast of materiality and form against its natural context yet associates with nature holds connection with imbedded culture and nature. He uses primitive formal system with the blended materiality such as ornament pattern of bricks. Unlike rationalism architecture such as Giorgio Grassi's reductionism, his formal method seeks multiplicity in order to reflect particularity of context.⁸⁷⁰ The selected cases are: (1) One Family House (Pregassona, Switzerland, 1979), and (2) Ransila Office Building (Lugano, Switzerland, 1981-85). His platonic geometry and symbolic vocabulary are blended with ornamental treatment and patterns. His spatial configuration partially based on his rationalism that enables to use the method of autonomous. Rationally formed with ill-formed combination of Botta's work will be interpreted through Peircean tripartition aligned with these original sources such as Palladian system and his aesthetic methods that are configured by the aspect of Tendenza. Perhaps, Tendenza itself controversially includes rationality and ill-rationality from a culturally outsider's view.

VIII.2.3 Case Study – Michael Graves

VIII.2.3.1 Humana Corporation Medical Headquarters (Kentucky, 1982-86)

His major transformation from the tendency of New York Five is recognized around 1974. Even if Graves had a successful stylistic achievement of originated from Corbusier's cubist work such as Synderman house (Fort Wayne, Indiana, 1972), he found his way by retrieving historical motif in such a work like his own house, House of the architect (remodeled warehouse, Princeton, New Jersey, 1977). The totalized Michael Graves' totalized intention to demonstrate design characteristics of figurative architecture can be seen in Humana Corporation Medical Headquarters (**Figure 8**). The use of art deco style modification is shown as a trade mark like Portland Public Service Building (Portland, Oregon, 1980- 1983⁸⁷¹). His tripartition system is indexed in this building with appropriate functionality. Previously designed one of his major work to extend his filed toward larger project was successful through Portland Public Service

⁸⁷⁰ Klotz, *The History of Postmodern Architecture*, 278.

⁸⁷¹ The construction year are referenced to Klotz, see *ibid.*, 328.

Building. Graves made further development of his figurative architecture in Humana Corporation Medical Headquarters.

Figure 8: Humana Corporation Medical Headquarters, Kentucky ⁸⁷²



Identifying three level of formal system (Step 1)

(1) Taxis

The appropriate use of principal system of his Art Deco reminiscent design style requires a conservative grid system while simplification and permutation of tripartition system applied for the allocation of elements in his tripartition system. As his philosophical base, the notion of figurative architecture synchronizes this fundamental rule. The fulfillment of taxis follows classic architecture while distortion and emphasis of scale appear to a

⁸⁷² Source, Wikimedia Commons. <http://en.wikipedia.org/wiki/Humana>

predominant characteristic of Graves' principle. Figurative architecture described by Graves is associated with poetic form architecture that opposes standard form of building. Poetic architecture is "responsive to issues external to the building"⁸⁷³ and sensitive while standard architecture is intrinsic as an internal language. Therefore figurative architecture concerns sensitivity on form and cultural expression. The origin of figurative architecture is related to classical rules and tripartition, but Graves intended to invent new classical architectural language of his version.

(2) Genera

One of the major dispositions of Michael Graves work is design vocabularies remind Art Deco style with vital color selection and the use of overly scaled effect. His genera can be identified as various forms through figurative sculptural form to the abstraction of simplicity on forms. For Humana Corporation Headquarters he uses abstract form that composes tripartition. Two years before starting of Humana Corporation Medial Headquarters, he made an enormous reputation for office buildings, The Portland building (1980) generally referred to one of typical representation of postmodern architecture. The use of genera for the both building can be shared in such as exterior windows, overly scaled keystone ornaments, and the rising curtain wall emphasis.

(3) Symmetry

Like other Graves' configuration of façade and organization of floor plan, he developed the symmetrical synchronization of multiple sides of exterior and many rooms and areas interior. The use of articulated tripartition is to applied almost every aspect of the building. This tripartition rule dominates almost all his work and constructs hierarchical systematic composition and insertion of permutation in terms of sequence of tripartition. His permutation provides rhetoric in sequential structure of form and its recognition. He uses relatively stable rhythm in terms of articulation of ornamental use of composition. The dominant permutation direction appears to be more vertical than horizontal in use of

⁸⁷³ Graves, "A Case for Figurative Architecture," 86.

volume and strength by emphasizing texture, color, and proportion. For symmetry of extensional semantics, Graves' formal coordination in size and repetition against the existing surrounding building scale and form reflects the continuation of façade at Main Street compose of historically preserved original buildings. Monumentally lifted up conference area (25th Floor) holds a round shape that accentuates permutation for symmetry of intensional semantics because of unexpectedly extended form above curtain wall.

Identifying three level of semantics (Step 2)

(1) Depiction

Recognition of composition is strongly related his use of formal rhetoric in permutation. There are two different kinds of permutation including: (1) formal permutation, and (2) scale permutation. I suspect permutation is a changing linear sequence that can be perceived. The sense of liner sequence is projected on the structure of hierarchy. The opposition is non-liner that provides heterarchy sequence. In the formal permutation, because of forms are permuted, the human perception is reflected and follows the hierarchy of this effect. In case of scale permutation, the recognition of unexpected is more recognizable. That changes the sequence of recognition. Depiction semantics is also characterized by the easiness of recognition of simple geometric form is more recognizable. Graves transforms the classical genera to that of simple geometric to enhance depiction semantics.

(2) Representation

Metonymy of composition is the representative characteristics in Graves' architecture. The representation semantics shows the association of architectural composition of forms and the meaning such as the tectonic of architecture. For example, Graves' transformed columns, capitals, and keystones represent the syntax of his architecture. Graves developed genera and applied with the proportional symmetry with overly

simplified format. But, this format is recognizable as the typical postmodern architecture as his syntactical representation.

(3) Expression

Metaphor of composition appears to express architecture is figurative even if the components are simplified to almost abstract. His abstraction carries figurative features because of the purpose of expression, his philosophy of architecture. When abstraction is transmuted to figuration, metaphorical process plays the role for the architectural intention that reinterprets classical architectural language to that of his version including rhetorical manner and breaking rules of scale and proportion. Behind this, he expresses the meaning of figurative architecture.

Identifying three categories of architectural identity (Step 3-1)

(1) Monadic architectural identity

Graves intended to establish a new language of architecture by reinterpreting existing ones including historical and classical architecture. Monadic architectural identity comes from this intention. The origin of architectural language is not however historicism; rather he meant to be individual creator rather than the follower of tradition. Monadic identity is clearly relevant to the possibility of the creation of new vocabulary of language of architecture between figurative and abstractive form. This new invention can be described as parole in a sense of Ferdinand de Saussure. The starting of his mind of this activity can be taken as his monadic architectural identity that will be the source of his creation.

(2) Dyadic architectural identity

Because of his intention to create a new language, including vocabulary and rhetorical revision of syntactical approach, the relation of building components has to be clearly articulated. As the result, his work shows the architectural language with clear hierarchical structure. Perceiver can understand relatively popular vocabulary interpreted by Graves. The formal simplicity applied to his work quite often with abstractive rather

than figurative. His rationality of new language is populated through his rhetorical treatment of form manipulation including permutation of vertical elements such as putting columns located on the top of the buildings without supporting almost any building components. He emphasized the physical appearance of these elements in order to configure formal representation that constructs his dyadic architectural identity. This identity is formal and more conceptual by ignoring or omitting materiality. Because he ignores materials he gained the freedom to use overly scaled elements in order to create special phenomenon such as the feeling of fantasy and surprise. The legitimation of this approach was accepted by commercial and popular culture.

(3) Triadic architectural identity

His creation of *a new language of architecture* was widely accepted. The use of *new vocabularies* was populated by many commercialism architecture followers. The vocabularies are repeatedly used and frequently coordinated in many his projects. The popularity of his work appears to be built-in the many societies beyond the cultural differences. For that sense, his intention as *parole* has change to *langue* if we interpret his works by Saussurean semiology. This interpretation can be further articulated by Peircean interpretation as I described in the Chapter IV, V, and VI. The persistence of his architectural language as cultural phenomenon obtained his triadic architectural identity. The goals are appears to make a balance of connection to the surrounding environment without giving up the transformation of contextual vocabulary. At the Humana Corporation Medical Headquarters Graves provided the challenge to contextual connection in spite of the different scale and buildings' size.

Identify shifting identity and explain 'hypostatic abstraction' process of the case (Step 3-2)

(1) Immediate interpretant

The building elements he uses accommodates in the system of tripartition. These are transformed from figurative to more abstraction, while figurative objects he uses are maintained the characteristic of figure and scales are emphasized. These formal

treatments are directly depicted as immediate interpretant. The idea of figurative architecture that connects humanistic image and form of architecture is extended to the form of abstraction transformed from figure together. Immediate interpretant triggers the perceivers' mind. In the case of Humana Corporation Medical Headquarters, forms are stays as abstraction. But the origin of this form derived from figuration of the surrounding physical and metaphysical level.

(2) Dynamic interpretant

Dynamic interpretant is a kind of the processes of oscillation. Because of building characteristics as a headquarters Graves' invented language needs to be communicative enough for corporative member as well as public. The canon of architectural formal system is reflected with existing urban context and corporate identity. It appears that Graves selected his language for this project between authentic and poetic architecture. The super scaled genera are applied with the mid-way between figurative and abstractive architectural elements. Such elements are oscillating perception when assembled as the tripartition parts. Graves' treatments of articulation in genera can be seen as succinct in form for metonymy, but loquacious in composition for metaphor by transforming simple shape back to the original figure imaginary or vice versa. Dynamic interpretant is perceived shifting between them as aesthetic experiences. For each shifting process, the effect of hypostatic abstraction is contributing to a process replacing architectural identities including monadic, dyadic, and triadic architectural identities. On the one hand, his canon appears to be abstract, and on the other, it turns to figurative imagination.

(3) Final interpretant

The meaning of language of architecture is finalized by the figurative architectural identity. He made the effect of allusion that expresses a poetic language of architecture as oppose to autonomous architecture (for example, Peter Eisenman). The role of final interpretant is aligned with this purpose. The building purpose of this project includes the function of headquarters. For the client's desire, the building must have symbolic and aesthetic power as an institutional existence. Graves provided the answers for this

requirement with agreeable form and materiality that define this function and ameliorated his avant-garde interpretation of postmodern classicism. The final interpretant is assigned with this condition in order to persist as the center of institution. These considerations on design can be seen in the public space of lower floors such as rising columns of portico, entry hall, and rotunda. In-between space is important to generate architectural meaning and message for the community and public.

Deduction of characteristics of case (Step 4)

(1) The element of scenographic

The elements composed for the Humana Corporation Medical Headquarters creates the sequential experiences approaching from outside and moving various areas of insides. Each experience the perceptive forms are constructed relatively steady tripartition reminding us classical formal rules yet the individual elements within a tripartition is filled with simplified material. But the texture and natural color of materials are not simple, and the combinations of those are more complex and rich. Overall, this experience can be comprehended as visualized perception overlapped with the movement of body and mind. Therefore, the experience will be scenographic. The functionality of experience is parallel with scenographic. However, it can be separable beside the exception of aesthetic purpose because of external language of poetic form.

(2) The element of contextual

The contextual aspect of architectural design is more or less needs to be concerned. The measurement has to include quality of consideration. Graves filtered contextual elements through his scenographic interpretation. Therefore, the connection to contextual always appears as the connection to a scenographic form at first then to an architectural identity. Existing urban context of buildings are explicit for scale and arrangement respecting elements of lower level façade design.

VIII.2.3.2 The Dolphin and Swan Hotels (Florida, 1987-90)

The concept of shifting scale is a major component of Michael Graves' figurative architecture that is identified as his technique to provide mental engagement of deformation and adaptation value. Through the Dolphin Hotel (**Figure 9**) and the Swan Hotel (**Figure 10**), Graves realized this effect with super scale in terms of the scope of object scale and its perception. This effect is not only on physical size but it is also relevant to the associated process of time experience. The effect of relativity between objects size and time-experience is reciprocal.

Figure 9: The Dolphin Hotel, Florida ⁸⁷⁴



Identifying three level of formal system (Step 1)

(1) Taxis

In case of large projects the relationship among buildings becomes additional layers to define taxis. It many extend to the level of *entaxis*. The idea of entaxis is explained by Alexander Tzonis and Liane Lefaivre as “a compositional approach ... not only in a

⁸⁷⁴ Source, Wikimedia Commons. Permission is granted under GNU Free documentation License.
<http://en.wikipedia.org/wiki/File:Dolphin-hotel-2.jpg>

linear direction but in all directions.”⁸⁷⁵ It is also reminiscent of ancient Greek temples located such as at Acropolis Athens and is the coordination of all buildings of the entire project. It defines the view of buildings associated with the radial layout of polar system in terms of panoramic views from the points. Greek architect Constantinos A. Doxiadis analyzed this geometrical system on various Ancient Greek temples and concluded his theory as *Twelve-* and *Ten-Part System*. Due to the belief of Ancient Greece societies that space is finite or infinite, the system divides space by twelve (finite space), and by ten (infinite space). This investigation is available through Doxiadis’ doctoral dissertation, *Architectural Space in Ancient Greece* (originally published in German in 1937).⁸⁷⁶ Unlike *Hippodamian* (grid) plan, this system coordinates buildings’ location with perceptual arrangement to maximize the scenographic intention. Graves’ scenographic intention with entaxis must be added to the individual taxis for The Dolphin and Swan Hotels project. Individual buildings taxis is composed with grid system and tripartition. Entaxis effects as macro layer with natural and humanistic capacity. For example, in Ancient Greek system east and west sides are open for sunrise and sunset views. Graves opens views for Dolphin and Swan monuments.

(2) Genera

The building elements correspond to totalized system while each element shows the characteristics within the system. The demarcation of unit of Genera has hierarchical especially align to the coordination of building scale and size for The Dolphin and Swan Hotels. Monumental genera are definitely involved as signs by themselves and emphasizing their effect along with background objects within the figurative context. The most of genera at The Dolphin and Swan Hotels are primitive form that can be easily recognizable. For example, primitive shape of triangle form in elevation, square shapes for windows and accented walls with windows, cylinder shafts to support giant vessel of fountain. This ability is aligned with this notion of figurative architecture. The comprehensive form is approachable for human perception naturally so that visual

⁸⁷⁵ Tzonis and Lefaivre, *Classical Architecture: The Poetics of Order*, 259.

⁸⁷⁶ Constantinos Doxiadis, *Architectural Space in Ancient Greece* (Cambridge, MA: The MIT Press, 1978).

accessibility provides the image of humanity. The system of tripartition obviously configures the composition of genera, and composed genera creates continuum of relation within a system.

Figure 10: The Swan Hotel, Florida ⁸⁷⁷



(3) Symmetry

Since taxis includes additional layer, entaxis due to the project size, the scope of symmetry has to include the level of individual building proportion and the total the coordination of entire project site arrangement. Compositional ambiguity and deformation between the layer of taxis and the polar system of entaxis creates fragmentations that can be corrected with rhetorical treatment like Mannerism and

⁸⁷⁷ Source, Wikimedia Commons. Permission is granted under GNU Free documentation License.

Baroque style. However, for Graves symmetry regarding taxis level and that of entaxis are of different layer so that they can co-exist for the mutual corporation. For example, the adjacency of each simple form is connected being helped with wall painting camouflage so that the formal fragmentation is not obviously seen. The arrangement between Swan Hotel and Dolphin Hotel the distance filled with lake provides appropriateness in terms of size of these giant monuments. Entirely site is coordinated with these landmarks. For interior side arrangement Graves provides explicit axial direction and the clear tripartition with rotunda, colonnades, halls, and corridors along with various segments of the facility. Palladian legacy of nine square systems is overlapped with this arrangement.

Identifying three level of semantics (Step 2)

(1) Depiction

The perception of figurative architecture would be appealing recognition of form that is legible by itself and composed within a unit. The name of architecture, Swan and Dolphin are depicted by the shape directly. This depiction creates a metonymy that indicates a place of pleasure and fantasy. As visitors become closer and closer the walls with the camouflage painting will be depicted as waving water. For the depiction semantics of extension the formal recognition from distance is coordinated so that visitors can depict entire site with sequence. For the depiction of semantics of intension, the depicted elements increase the expectation of visitors in order to suggest further depiction as the distance becomes further closer.

(2) Representation

Graves intended to produce the analogy of verbal language for architectural language. Figurative architecture has to be therefore closer to verbal language in that sense. Representation semantics is understood as mimesis so that genera can produce meaning of architecture that is Graves' intention in the realization of figurative architecture. In general, figurative architecture has characteristics of humanity, sensitivity, and cultural

orientation. The articulated genera unified in a frame provide the representation semantics of extension. For example, large triangle guest room tower is resembled to pyramid with square windows representing the each unit of guest room and the size of numbers of rooms that indicate the size of facility. For representation semantics of intension, the same pyramid provides fantasies as if the size of room will be shrunken and therefore represent the transformation of human size smaller because of gigantic monument of dolphin statue. At the level of interpretation, scale shifting adaptation influences the imaginary perception for visitors' relaxation and dreaming fantasia.

(3) Expression

The coordination of entire site expresses a pleasures feeling for visitors with narrative ways. The sequential engagement with various experience generate continuum of architectural communication that fulfills visitors' mind with fantastic relaxations. The system of entaxis works with narrative formal coordinate that provides the comprehensive perception for visitors' spectacle view between Swan and Dolphin both hotels. Graves' intention would be to create individual narrative experience that creates further collective experiences to perceive these figurative forms in-and-out and far-and-near of facilities. For expression semantics of extension, articulated formal unit of genera with tripartition provide syntactical architectural meaning for the sequence of collective perception. Graves coordinated exterior and interior by using tradition of tripartition that configures anthropomorphic connection of spatial coordination with such spaces at rotunda, entry halls, and patios. These spaces are configured as central void forms that follow legacy of Palladian nine square methods and tripartition. For expression of intension, these centers with related hierarchical spaces trigger visitors' collective mental engagements. The meaning of collective would be individually collective in experience and collectively accumulate the individuals' collective experiences. This totalized experience can contributes to the metaphorical shift of commercially programed non-daily experience.

Identifying three categories of architectural identity (Step 3-1)

(1) Monadic architectural identity

Anthropomorphic consideration takes Graves' principle of his architecture. The notion of figurative architecture as oppose to modernist universality. Graves' universality is based on the invention of architectural language for his practice and supporting theory. Grave concentrated his principle, making won language to this commercial building with monadic mode that defines his language validity and rationality.

(2) Dyadic architectural identity

Graves' syntactical methodology is carrying the traditional tripartition, Palladianism, and humanism. The result of this configuration contributes to his realization of figurative formal system with which simulacrum would be associated. The identity of formal vocabulary plays the role to define which syntactical vocabulary fits the certain idiom. Graves' vocabulary and idioms are invented between figuration and abstraction. Such vocabularies are modeled by Graves from his association with classical formal system, tripartition. He applied these models to the context of his hierarchical system. The way he does for each application, the selection process of dyadic relation between a form and its metonymy. This relation resembles to the notion of signifier and signified system for Saussurean, and stand for relation for Peircean Semeiotic. This dyadic relation can be collections of narrative idiomatic relations that would suggest metaphorical effect by the association of transformable mental adaptation. Examples of the Swan and Dolphin Hotels can be seen in the centrally located void space, namely rotunda. Graves spends special attention of the center associated with surrounding relevant lower hierarchical building elements in order to configure formal identities, dyadic architectural identity. The relationship between wall and windows is always controlled by Graves in order to provide appropriate proportion of tripartition. When he use curtain wall additional layers will be provided to create figurative balance.

(3) Triadic architectural identity

His architectural language replacement project of modernist abstraction with his figurative architectural language is to emphasize poetic architecture that coexists with standard architecture. Graves differentiates poetic architecture as external expression as opposed to standard architecture as intrinsic necessity. Obviously these two languages of architecture need unification to realize actual architecture in the specific condition. The solution itself came from figurative form that is detached from the standard architecture's intrinsic necessity such as materiality and wall structure system. This fragmentation has to be reunified in order to reach higher achievement in architectural quality through figuration. Justifiable fragmentation between form and function—structural and material rationality should be cultivated through Graves' new architectural language—cultural identity. Graves' intention itself needs to be provided pragmatically. This process created triadic architectural identity.

Identify shifting identity and explain 'hypostatic abstraction' process of the case (Step 3-2)

(1) Immediate interpretant

Graves' "namable objects" is for the creation of figurative form. Norberg-Schulz explains on Graves' work stating, "the forms are indeed 'namable objects' in the sense of things that we recognize and remember."⁸⁷⁸ This namable object is not typological object in a strict sense. It is versatile objects to be applied to a language of architecture by Graves. The fundamental characteristics of namable object can be a primitive unit that can be a depicted object that stands for a priori units in history because it already has a name. Graves invented stand for connections by changing original role of an element in order to configure new sign that can be an interpretant immediately depicted. For Swan and Dolphin Hotels, he invented such immediate interpretant including, gigantic statues of swan and dolphin, waiving camouflage on walls, ornament covering lower part of building as rustication, and pyramid tower. These are namable, recognizable, and

⁸⁷⁸ Norberg-Schulz, "Michael Graves and the Language of Architecture," 10.

adaptable for the specific purpose as a vocabulary of an architectural language. For interior side Graves created node and path with tripartition system. The elements constructed in his language is immediately recognized as a center of space with void rotunda and relevant hierarchical tripartition such as base walls, columns, arches, and other ornamental figures.

(2) Dynamic interpretant

The process to configure meaning of architecture requires narrative sequence of perceptual experience. The continuation or interruption of this narrative always anticipates an adjacency of next moment continuation or interruption. Graves set nodes with void space such as rotunda in order to connect and disconnect these continuations for his interior plan. Some examples of interruption can be seen more detailed treatment of wall and column design that cut off or permute composition such as higher level base wall design or columns or arches without supporting other elements or less supporting of them. For exterior design gigantic statues are perceptually predominant and other subordinate elements are configured, while in the interior the nodes are emphasized to connect subordinate elements. These narrative experiences with continuation and discontinuation stores units of memorability that stimulate perceiver's expectation and surprise. Each time perceiver must be adjusting his or her memories reflecting narrative formal sequence. This adjustment, which might be an aesthetic experience, can be understood as dynamic interpretant. Scale shifting of gigantic monument works with dynamic interpretant. Hedonic adaptation and prospect-refuge is associated with this perceptual dynamic process.

(3) Final interpretant

Finally all narrative experience collected from site level to detailed perception will be configured as totalized feeling that characterizes Graves' new architectural language. Each element provides detailed feeling of Graves' taste while collective taste creates his new classicism style. This classicism requires perceivers to engage the metaphorical process in dynamic interpretant stage, then, it will be transformed as final interpretant

that expresses his original intention of *poetical architecture*. When we feel *poetical architecture*, other words it can be said *simulacrum*, is the achievement of a meaning of architecture.

Deduction of characteristics of case (Step 4)

(1) The element of scenographic

To create image of poetical architecture with the layers of scenographic elements requires clear purpose and syntactical strategy, technique, and aesthetics. Graves realized his syntactical strategy with the simulacrum of classicism by adopting proportional and figurative scenography. The use of effective technique can be seen through layout of path and node including between two hotels beyond a lake. Graves approaches judgment of aesthetic from the effectiveness of perceptive adaptation of scale shifting. When the gigantic statue recognized symbolized perceptive objects, our sense of scale, including our sense of time, will be manipulated so that all other objects surrounding them will be slinked. Perhaps we would have illusion that everything would be smaller until the arrival to the entry, and then, everything will be magnified suddenly. This could be a relevant phenomenon and a technique of Italian mannerism. Grave cleverly established hierarchical characteristics of scenographic layers based on tripartition that penetrate syntax, strategy, technique, and aesthetics.

(2) The element of contextual

The Swan and Dolphin Hotels are artificially contextual. Other words, created context will be the base of further context. In a sense architecture itself contextual, and involving other contextual beyond one's context—intercontextual. In case of the Swan and Dolphin has less intercontextual but Graves' context has inter-historical-context. He made collectively architectural context within his works with versatile architectural vocabularies built up his poetical architecture.

VIII.2.4 Case Study – Arata Isozaki

VIII.2.4.1 Tsukuba Civic Center (Japan, 1980(79)-83)

Arata Isozaki's Tsukuba Civic Center (**Figure 11**) is one of the major works that coincides with his turning point to depart from mannerist architectural theory and method. His association of mannerist was influenced his master Kenzo Tange and Japanese cultural tendency. The attitude of mannerism is long cultural tendency from ancient society in Japan. Isozaki was not exception from this cultural trend in addition to his direct master Kenzo Tange who taught architecture at Tokyo University and at Tange's actual projects' design. Tange was taught by his master such as Chuta Ito who imported western architectural theory and combined nationalism philosophy and traditional Japanese architectural construction during the revolution period of Japan. Essentially, Isozaki's mentors, precursors were deeply involved with the process of mixed cultural development, which might have an aspect of mannerism. Isozaki developed his architectural theory under these influences. Tsukuba Civic Center is the highlight for that purpose. The desire to realization of historic icon to the different context was made by this project. Italian historical form is inverted between concave and convex. This rhetorical permutation can be seen Isozaki work many times. This project is one of the representatives in terms of size and the role of architectural identity effect.

Identifying three level of formal system (Step 1)

(1) Taxis

Isozaki intended to use his own theory on mannerism that defines his architectural principle. This rule was set explicitly by using archetypical architectural phrase insertions to Tsukuba Civic Center. The justification of using mannerism attitude was established; however, implicit cultural background in part. Isozaki intended the imbedded tendency of mannerism to be exposed through Tsukuba Civic Center. Therefore, taxis of this project have originally variety and his challenge is to assemble many different architectural phrases in order to synthesize unified whole. Because of this system of citation from several architectures, Isozaki needed to adjust fragmentation of

each of their taxis including grid and tripartition. In-between he inserted conjunction in order to provide the synergy of citations, which are transformed according to narrative needs. The mannerism of Tsukuba Civic Center is not billboard to understand the meaning at glance.

Figure 11: Tsukuba Civic Center, Japan ⁸⁷⁹



(2) Genera

One of Isozaki's models from mannerist is Palladio. His direct quotation and indirect systematic reference in terms of the use of classical tripartition and its transformation can be recognized for Isozaki's work such as in housing projects mounting volt shape

⁸⁷⁹ Source, Wikimedia Commons. Permission is granted under GNU Free documentation License.
http://ja.wikipedia.org/wiki/%E3%83%95%E3%82%A1%E3%82%A4%E3%83%AB:Tsukuba_Center_Building_2008.jpg

roof that defines Palladian nine-square formal configuration. On the level of genera, Isozaki uses Palladian vocabularies as implicit insertion that can be seen for example the reminiscent of Palladian broken arch motif of main tower for the organization of façade and a landmark. The articulation of tripartition defines further detailed level hierarchy of genera. Along with this implicit quotation, Isozaki provided abduction of historical motif of Italian plaza, and inverted Michelangelo's Piazza del Campidoglio. This inversion includes direction, material color, and transformation form convex to concave. He also inserted elective use of postmodern style vocabularies such as Charles Mores' fountain design at Piazza d'Italino, and others. The use of genera from different culture is highlighted in this work so that Isozaki can use the method of displacement.

(3) Symmetry

Disjunctions of many quotations create the need of rhetorical arrangement. Between these arrangements Isozaki inserted another layer of rhythmic sequence of formal allocation. Consequently, connections of these treatments provide the narrative sequence that composes citation of the well-known traditional poetical phase called *Honka-dori*. The creation of a new form is based on that of old but this insertion stimulates further rhetorical stimulation. Isozaki explained this intention in his writing, *Image Game* (written in Japanese).⁸⁸⁰ The arrangement of traditional tripartition for symmetry works with base, shaft, and top coordination.

Identifying three level of semantics (Step 2)

(1) Depiction

Depiction works as double layer system. For trained eyes the strategy of depiction is straightforward using referential iconic element of various work of architecture as citation. The quotation works are recognizable and become an assembled image to construct his architecture at metonymical level. For layperson these elements might be accepted as more primitive formal perception without direct reference but with reference

⁸⁸⁰ Arata Isozaki, *Image Game* (Tokyo, Japan: Kajima 1990).

to cultural context that derived from previous experience at metaphorical level. Either way depiction may take referential relations in order to create semantics. For depiction of extensional semantics, forms are depicted through function of reference to previous experience with acknowledge or without it. For depiction of intensional semantics, these experiences would connect metonymic mental activity for trained perceiver, while for layperson it would be more sequential arousal stimulus and could occur metaphorical image making.

(2) Representation

Articulated sequential units are connected at some point with disjunction because genera are cited from unrelated origins. But the disjunction of units mentally requires filling the gap of unsatisfied solution of problems. This leap creates metaphorical transformation, and controversially creates sublime and hedonic adaptation to reform them as unified disjunction that creates new meanings. As representation of extensional semantics, the sequence of disjunction will be concatenated to form a set of quotations that re-establish building elements. For representation of intensional semantics, the re-establishment of elements' unification triggers subliminal feeling. This mental activity becomes the congruent aesthetic experience of disjunction partly strategically planned, otherwise derived from contingent juxtaposition. Isozaki created new narrative context with Tsukuba Civic Center by the layout citations and their metaphor.

(3) Expression

Isozaki intended to express displacement of culture through Tsukuba Civic Center by various citations of culture regardless of location and historical time. His desire to be a mannerist is explicitly displayed by borrowing phrases of western architectural cultural elements. By doing this perhaps he was seeking spatiotemporal and sequential dislocation—dislocation after dislocation—in order to establish totalized dislocation that might have a chance to transform his architecture other than a summation of citations. This possibility can be underlined structured psychological needs of adaptation and subliminal experience. The structured psychological needs are not necessary to recall

Lacan's view of psychoanalysis. Instead, it would be a required condition in general for psychological aspects of relations in mode of being. Peircean secondness mode of being is relevant to this causality. And formal causality is possibly related to this explanation of structured psychological needs. He selected the combination of the formal citation that needs to be suitable to his conceptual and functional intention of the building. The transformed result of formal citation adjacent to another transformation creates new context in Tsukuba Civic Center within the urban context in Japan. This cultural transition explicitly creates new meaning for community to face new experience out of the traditional domestic context. This direct affect associates with the expression of extensional semantics to formalize new image beyond cultural difference. Furthermore, perpetuate dislocations bring perceivers to remind them their cultural identity abruptly. This works as the expression of intensional semantics. For example Michelangelo's mannerist formed piazza connected with Moor's formless piazza would be transitional experience for visitor to bring them to seek their own cultural base. Otherwise, Isozaki's intention would be a chaotic expression of citation architecture.

Identifying three categories of architectural identity (Step 3-1)

(1) Monadic architectural identity

If Jean-Francois Lyotard negated the center of knowledge—end of grand narrative—is a condition of postmodern architectures, mannerist style of Tsukuba Civic Center would be qualified as one of them. Isozaki would accept losing center of rationalism, and pursued irrational re-construction of narrative meaning by architecture. At the starting point of this project, unconditional acceptance of this attitude was monadic architectural identity. Modernism architecture associates with rationalism while postmodern architecture followed philosophy of postmodernism who questioned this belief. Therefore, Isozaki follows this doubt about rational construction of architecture. He deconstructed and re-assembled as mannerist architecture. This origin of Isozaki's architectural monadic identity of Tsukuba Civic Center is located without having steady cultural location.

(2) Dyadic architectural identity

Isozaki described Tsukuba Civic Center as an architecture of disjunction in his writing (Image game,⁸⁸¹ GA,⁸⁸² and others). Site is designed with the center as a void place filled with Michelangelo and Charles Moor. This treatment is ironical and metaphoric in terms of axial and origin. The perfection of Michelangelo's Piazza del Campidoglio is disturbed by Charles Moor's fountain of Piazza d'Italino. Isozaki inserted disjunction in order to construct center of site. Isozaki uses inversion of color and form of plaza for Campidoglio and made a crack to insert Moor's fountain. By destroying the perfection and juxtaposing formal opposition, he intended to make his own creation. Setting an opposition with new relationship explicitly is showing his methods for Tsukuba Civic Center. In the same time, imposing dyadic relation of formal opposition is his inevitable rules and reality for his identity. This attitude is dyadic architectural identity to construct Tsukuba Civic Center. He created disjunctive dyadic sequential relations to form his meta-narrative believing center became void and ground of center is hidden in the sunken garden.

(3) Triadic architectural identity

When architecture has many players from previous well-known forms, the place of architecture would be theatrical space. Isozaki created such place through eclecticism of Tsukuba Civic Center. This theatrical space involves formal elements of building, multi-functionality of site, and events of community. The players of building as formal assemblages are required to serve as functional facilities including offices, Hotel, theaters, stores, and event spaces. The dichotomy of form and function is mediated by the act of engagement of human who use architecture. Isozaki set the stage for people who act and eventually creates new meaning for architecture and the individual person.

⁸⁸¹ Ibid., 275.

⁸⁸² Alessandro Mendini, "The Tsukuba Center Building," in *Global Architecture: Arata Isozaki & Associates Tsukuba Center Building, Ibaraki, Japan, 1979-83*, ed. Yukio Futagawa (Tokyo, Japan: A.D.A. EDITA, 1993).

Then, these are collectively became triadic architectural identity. The identity is partially of Isozaki and others are of people and community.

Identify shifting identity and explain 'hypostatic abstraction' process of the case (Step 3-2)

(1) Immediate interpretant

Immediate interpretant comes from multilevel and multilayer in the sequence of narrative connections of disjunction. Cross cultural nodal points are on the marker location of these unconventional combined signs. The connection therefore ambivalent and is frightened for the normal sense. Immediate interpretant of Tsukuba has characteristics of astonishment that the expectation of formal articulation holds one side is tectonic and other is rhetorical. The tectonic aspect refers to materiality and the level of construction that holds detailed completeness while emphasizes contrast of materiality when elements joint each other. Rhetorical aspects are subliminal requires filling-up the disconnection of styles of citation enjoying catalogue of formal reference and their disjunction.

(2) Dynamic interpretant

Dislocation and shifting the scope of sign units composed of narrative sequence of interpretants, sign units. This narrative experience provides total meaning while reflectively changing the combination of sequence because narrative experience is not based on chronological spatial order. The linkage of narrative experience further creates meta-narrative experience. This shifting attitude is the characteristics of dynamic interpretant of Tsukuba Civic Center. The replacement of the combination of architectural identities including monadic, dyadic, and triadic is required for this shifting along with hypostatic abstraction theory.

(3) Final interpretant

Final interpretant is resulted from the totalized effect of mannerism experiences which are innate at the starting and ending in the process of shifting dynamic interpretant.

Once architecture is released in public, architecture perpetuates its existence that affects spatiotemporal interaction in a community. Aligned with this interaction the symbolic image of Tsukuba Civic Center many define important characteristic of a community. Isozaki's intention of dislocation would provide the realization of individual's interpretation. Tsukuba Civic Center provides this possibility with not restricted manner. In a sense rationalistically defined citations are fixed components and tectonically oriented, while its usage in a narrative context gives visitor rather freedom to make imagination. This free-minded image is technologically supported and emancipating cultural experience from domestic or vernacular realm. This mental phenomenon is the final interpretant of Tsukuba Civic Center. Isozaki realized an aspect of meaning of architecture as unification of bipolar— tectonic materiality and romanticism with free minds.

Deduction of characteristics of case (Step 4)

(1) The element of scenographic

Isozaki used well-known historical elements of architecture as citation, then, created narrative sequence of new meaning of architecture. The quoted vocabularies are visually convincing perceptive purpose that creates metonymical and metaphorical image making. Isozaki uses disjunctive connections for citation are configured by eclectic manner. Partly this manner is embedded as cultural tradition in Japan, and partly those of western mannerism tradition. Isozaki expressed his desire and belief at that time as a mannerist architect. Disjunction is infinitive receptacle of spatiotemporal mannerism possibility. This possibility extends the perfection of tectonic that creates the element of architecture.

(2) The element of contextual

Regarding contextual aspects of architecture, similar to Michael Graves, Arata Isozaki created internal contextual relations through sequential disjunctive mate-narrative connection via mannerism. Meantime, Isozaki extended this connection to external context through void center of plaza. This building is located as a *Center* of the

community but actually, the center is a void space that should be open to public and should be filled with a meaning by free mind of people. The element of contextual in Tsukuba Civic Center is transformed in order to express the possibility of metaphor with free mind rather than belong to locality and vernacularism.

VIII.2.4.2 Museum of Contemporary Art (Los Angeles, 1982-86)

Isozaki's work in this project can be seen as cross-cultural. Imaginary map and figure is exchangeable in his work. While Tsukuba Civic Center imported Italian culture figure to map—Japanese context, Museum of Contemporary Art (Los Angeles) (**Figure 12**) flipped the effect of map and figure. This permutation appears through his treatment of materiality and shape with the hierarchical structure. Perhaps, Museum of Contemporary Art (Los Angeles) was reversed work for Isozaki for the purpose to terminate his long term belief—mannerism architecture, and depart for finding his theoretical mythology. This work is relevant to find and measure the deviation and proximity in terms of cultural location of his identity. Isozaki intended to eliminate locational identity of Tsukuba Civic Center by the insertion of representational works of different culture. Instead, Museum of Contemporary Art (Los Angeles) inverted his intention to express his location through the project, or at least it shows his subtle recognition and the reduction by minimizing explicit citations from past architecture. It shows more cross relations to materiality and not so much to tectonic with few quotations from such as his interpretation and modification of Palladio.

Identifying three level of formal system (Step 1)

(1) Taxis

The location of building and that of identity possibly need to link with a basic strategy of conceptual scheme in terms of proximity and deviation from the architect's view point, and theoretical orientation. Museum of Contemporary Art (Los Angeles) has the above needs. Isozaki's conceptual scheme is to juxtapose the essential elements of Japanese domestic and that of Western (mainly Western Europe and U.S.A.). Unlike the project of Tsukuba Civic Center, Isozaki used Japanese culture background and Western style

figure, even if this background and figure relationship is subtle and exchangeable occasionally. The Taxis system of The Museum of Contemporary Art accommodated his internal belief and the relationship surrounding urban environment of downtown Los Angeles, and the grid system and tripartition remind us modernism style with asymmetric formal arrangement. The grid orientation follows street grid that accommodate with downtown high density and urban context. He carefully measures a deviation of accommodation and transformation of grid system. He uses explicit tripartition applied to the specific elements selectively.

Figure 12: Museum of Contemporary Art, Los Angeles ⁸⁸³



(2) Genera

The specific application of explicit tripartition and subtle level tripartition both are coordinated with layers of hierarchy. The specifically selected genera, such as cylinder, vault, and pyramid are assembled as a part of articulated form system while sublevel

⁸⁸³ Source, Wikimedia Commons. Permission is granted under GNU Free documentation License. http://en.wikipedia.org/wiki/File:MOCA_LA_04.jpg

tripartition is inserted as background mapping that further contains sublevel elements of tripartition. These are such elements including exterior wall covered by Indian sand stone with randomly accentuated gradation, patterned wall system covered by metal panels with 45-degree-angled pattern. One large size and ten small size pyramids are covering galleries to provide functional and ornamental elements. Overall tripartition consists of base below piano noble, above piano noble plaza, and cylinder and pyramid roof. Metal wall panels are corresponding with cylinder roofing materiality sharing role as second and third level of tripartition as well as role of map and figure simultaneously. Japanese traditional motif of *shoji partition* can be seen in the skylight coverage of pyramid and gavel side cladding at cylinder roof.

(3) Symmetry

The approach to the analysis of symmetry in The Museum of Contemporary Art (Los Angeles) can be associated with the range and scope to see the building. With the different range and scope, the recognition of arrangement would have multi-layer. Depend on the layer, specific building elements can be observed. Therefore, layers of an arrangement of symmetry can be shifted depend on such distance from the building. In the crosser range, symmetry is concerned with microscopic relations of spatial quality, functionality, and materiality. Such aspects are rhetorical in Museum of Contemporary Art. Isozaki intends to assemblage these relations as a part of harmonious configuration to align with the design elements associated with nature (e.g. daylight) and tradition (e.g. ceiling light with grid pattern design). These microscopic relations are extended to exterior in order to be a part of rhetorical elements of other layers of symmetry. For example, the relation to the functionality of daylight is extended to the elements of pyramids arranged on the roofs. Along with the volt cylinder roof, the pyramids are arranged for long distance view that holds the rhythm of small and large size pyramids allocations. Isozaki provides the sequential arrangement via piano noble with open space that divides two sides physically and connect two sides mentally. This arrangement defines conceptual arrangement of entire facility and site.

Identifying three level of semantics (Step 2)

(1) Depiction

Geometrically simple, contrasted in a context, and analogically related form are easily recognizable, and they can be depicted straight forward. For The Museum of Contemporary Art (Los Angeles), Isozaki selected relatively few genera as opposed to the abundance of those of Tsukuba Civic Center. The simplicity of geometry can be seen, for example, volt cylinder and pyramid roof. They are also contrasting figures within a context of site that includes other parts of building as map and the surrounding visual environment. Eleven pyramids are formal analogy made layouts axially within context of building. The repetitive square windows and cladding panels are also showing analogy in context. For depiction of extensional semantics, formal aspects of genera stated above makes effects on Gestalt psychology. For depiction of intensional semantics, the relation of these genera to perceiver's mind crates referential meanings with respect metonym aspect of architectural vocabularies (e.g. pyramid as symbol).

(2) Representation

The collections of depicted genera create a unified sequential formal entity with multilevel. These entities are articulated as the meaningful unit in order to fit the totality of a context. This meaning level would include metonym, metaphor, and their combination. The elements such as pyramid and volt top are image of rationalist such as Boullé and Ledoux, architects from enlightenment. Isozaki provided ten smaller size and one larger size pyramids in order to have skylight into gallery spaces on daytime, and perhaps for landmark lighting during the nighttime for exterior design. Pyramid can be a metonym of enlightenment and metaphor of lighthouse to give the direction of intellectual symbolism as a museum, and vice versa. Isozaki uses a volt roof as a metaphor of Palladian architecture. For his works especially single residential projects volt cylinders are used to define special configuration based on Palladian style such as nine-square floor plan. For Isozaki the form of volt become almost systematically a representation of Palladianism metaphor. For the representation of extensional semantics,

the sequential relationship of each enlightenment individual form is transformed as the means to produce new sets of formal unification. However, the boundary of this new formal unification shows disjunctive relations with other parts of building. Isozaki still keeps this fragmentation between elements. For representation of intensional semantics, Isozaki's above formal relationship including disjunctive one will be possibly interpreted by viewers to such as a lighthouse for example. This metaphorical intention is a part of Isozaki's design strategy and idea.

(3) Expression

The totalized hierarchy consists of articulated units that express formal and mental meaning. Isozaki expresses his design idea not directly design object.⁸⁸⁴ His design idea is supported by his beliefs on architecture and the strategy of The Museum of Contemporary Art located in-between Japanese domestic and Western culture. Architectural expression reflected the above conditions. The expression of extensional semantics is supported by various accommodations and effects of form that mediates disjunctive connection. For example, wall cladding by Indian sand stone dominates materiality of this building. This western motif is possibly disjunctive to cover without having appropriate articulation with other delicate detailed elements such as at the base of pyramid or metal panels covering upper part of wall and soffit panels at piloti of entrance. This metal panel has diagonal cross pattern that reminds traditional exterior wall pattern called *Namako-Kabe* used for traditional vernacular houses in Japan. This disjunction is mediated by the treatment of Indian sand stone pattern with randomly provided graduation that also reminds the tradition of step stone pattern with yin and yang composition of traditional Japanese tea ceremony garden design. Isozaki made this kind of conglomerate to express multi-layered structure for resolving intended disjunction. This aspect is rhetorical and metaphoric as the expression of intensional semantics of Museum of Contemporary Art (Los Angeles). Isozaki's rhetorical

⁸⁸⁴ Hajime Yatsuka, "Arata Isozaki after 1980: From Mannerism to Picturesque," in *Arata Isozaki Architecture 1960-1990*, ed. Kate Norment (New York, NY: Rizzoli, 1991), 21.

intensional semantics would create different interpretation for viewers, but his design intention and expressed formal structure will guide their interpretation.

Identifying three categories of architectural identity (Step 3-1)

(1) Monadic architectural identity

The Museum of Contemporary Art (Los Angeles) is considered as Isozaki's turning point work from mannerist to picturesque.⁸⁸⁵ The notion of disjunction has less distinctive character to explain new direction of Isozaki. The formal hierarchies are not clear but still exist in his work as well as disjunction. Is the mode of picturesque is intrinsic or extrinsic to Isozaki's work of architecture before this project? This question might recall his basic principle of architecture that seeks a perfection of from regardless mannerist or rationalist. The attitude to achieve tectonic and the belief of mannerist, for example in Tsukuba Civic Center, exemplified this principle that the mind of picturesque is intrinsic, and this mind appears to be continued to this project and even later his projects. Picturesque is not theory but idea that underlines his work, even if his attitude toward mannerist is changed to be less important. Picturesque is not conditional rather it is basic needs to construct his architectural mind. Therefore, the idea of picturesque is monadic. This monadic idea was realized as a monadic architectural Identity by Isozaki's standing point at the time of Museum of Contemporary Art. It was an identity he found, the essence of aesthetic as related to the notion of picturesque in the juxtaposition between Japanese domestic and Western enlightenment forms.

(2) Dyadic architectural identity

For the method to deal with juxtaposition of building elements to transform to Isozaki's ideal, he pacified conflicts and contradictions. Isozaki appropriated his solution with multi-layered overlapping. The elements for this method involved natural phenomena from a contextual to figure level at where multi-layered effect system plays the shifting role between background and foreground. For example, the effect of natural

⁸⁸⁵ Ibid., 22.

phenomenon of daytime and nighttime multiply his intention of metaphor. While pyramids serve as symbolic elements of enlightenment functioning daylight supply, they are the symbol of lighthouse or lantern to precipitate intellectual signal. Red Indian sand stone cladding shows detailed texture because of the contrast of strong light and shadow. This shadow is shaped with length and direction on red stone color reflecting sunlight source condition and time difference. Moreover, rain water will change the depth of red stone color and texture entirely. The combination of effect from nature is obviously influencing the layers of juxtaposition of building elements to be selected which phenomenon becomes predominant figure under multi-layered overlapping. Eventually this overlapping will merge disjunctive relation of elements between Japanese domestic and Western enlightenment to create further linkage towards metaphor along with the proximity of viewer's standing point physically and mentally. Natural phenomenon and building element has dyadic relation within Isozaki's intention to have multi-layered effect as physiological relations and turn to psychological relations. These relations would be dyadic and multilevel. Therefore, they can be qualified as dyadic architectural identities to determine the process of reduction, hypostatic abstraction. Isozaki used this strategy effectively to overlap the phenomenon to fill the gap of subtle disjunctive relation of the Museum of Contemporary Art (Los Angeles).

(3) Triadic architectural identity

The totalized system of Isozaki's intention for The Museum of Contemporary Art (Los Angeles) is unified by his ideal, physical and formal condition of building elements, and the association with context. His ideal is to express architectural meaning in-between cultural difference of Japan domestic and Western enlightenment. This ideal is extended from his earlier work having highlight at Tsukuba Civic Center. His attitude and desire as a mannerist with innate origin of picturesque characterize his deep wish and belief. The selection of formal condition reflected his desire and belief. The methodology to present was changed more exclusive way by limiting genera to intensify the effect of the association to natural phenomena. Finally, Isozaki contextualized his work in the realm of cultural exchange as a part of the progress of cultural growth and influence on

dynamic flow of architectural meaning generation through language. This contextualization is the evidence of triadic architectural identity of Museum of Contemporary Art (Los Angeles). The process of contextualization takes multilevel through microscopic detail relation of genera and the surrounding context and macro level cultural influences.

Identify shifting identity and explain ‘hypostatic abstraction’ process of the case (Step 3-2)

(1) Immediate interpretant

How interpretant associated with its hierarchy of meaning not just that of form possibly define the clarity of interpretant. The conglomerate of woven results of interpretant derives from extensional semantics and intensional semantics described above. Isozaki selectively used genera to highlight the intensional semantics partly along with mannerist and originally regarding picturesque. Immediate interpretant can be perceptual appearance of genera such as pyramid and cylinder vault with material richness of Indian sand stone, and diagonal wall panel pattern. Initial appearance impacts viewers to recognize the contracting or disjunctive patterns within a context, chiefly dominated by materiality and primitive formal interpretation.

(2) Dynamic interpretant

As recognized the multi-layered interaction of juxtaposed sensitivity of building elements, viewer’s physiological and psychological dynamic connection will prepare one’s metaphorical interpretation. This interpretation might involve cultural awareness rather Gestalt psychology stimulus. *Dynamic interpretant* would be a vertex of these mind results during the process of replacing hypostatic abstraction entities including monadic, dyadic, and triadic architectural identity in order to prepare the totality of understanding of architecture—The Museum of Contemporary Art (Los Angeles). Aesthetic experience depiction is relevant to monadic architectural identity; materiality associated with nature and formal relation concerns with dyadic architectural identity;

and contextualization process deals with triadic architectural identity. When a set of combinations are replaced, for example, the form of pyramid becomes a lighthouse or a lantern covered by *shoji partition* (traditional Japanese sliding door or windows framed by wood and filled with traditional white paper).

(3) Final interpretant

The selection of the units of formal juxtaposition, natural phenomenon, and metaphorical meaning proceeded by *dynamic interpretants* guides the *final interpretant*. Isozaki's totalized desire is, unlike Tsukuba Civic Center, seeking new way of constructing his architectural ideal. His intention is whether projecting the possible final interpretant of Museum Contemporary Art (Los Angeles) can be approach from the realization of his goal achievement regarding the concept of transitory-ness that holds the eternity of meaning generation that Isozaki attempted. At this point Isozaki's deep inside recalling Japanese cultural preconception traditionally attached him is going to play the role. This deepest desire with the concept of transitory-ness brings back him to the idea of *ephemeral*, the notion of changing of all things like the stream of river, traditional tea ceremony aestheticism, or the reminiscence of 1960s metabolism in Japan. The cities in Japan have no walls, then architecture so as does. The layers of the components of city overlapping and influences each other. Isozaki realized this kind of idea as the final interpretant of Museum of Contemporary Art (Los Angeles).

Deduction of characteristics of case (Step 4)

(1) The element of scenographic

The transition from mannerism architecture to picturesque may shallow movement for him. Rather his intrinsic desire wants to show beauty of architecture that is originally *ephemeral*. The form of architecture is typological entity while aesthetic aspect of architecture is ethical and transitory. If scenographic is attached to formal, it appears not that of Isozaki. In his case scenographic has the concept of shifting and changing, and then return to the origin. His scenographic catalogue is assembled with disjunctive way

more or less. But, the resolution of this fragmentation was made by overlapping of multi-layered hierarchy of contextualization.

(2) The element of contextual

The baseline of contextual is changeable because of multi-layered interaction between figure and map. This interaction is applied not only formal context but also that of cultural aspect. The expression of The Museum of Contemporary Art (Los Angeles) shows both Western enlightenment figure and Japanese domestic figure and map within building form. Also, the cultural background shows Western enlightenment figure and map as well as Japanese domestic map. The form aspect of Western enlightenment figure can be seen as depiction of primitive form such as pyramid and vault roof, while map can be understood overall tectonic formal treatment. The form aspect of Japanese figure is understood within sub-hierarchical element within enlightenment form, while map can be seen embedded Japanese traditional material treatment such as random emphasis of gradation on Indian sand stone and diagonal pattern of wall panels. For cultural context, Western figure is actual urban context physical level, while the location of Los Angeles influences cultural aspect of context. Japanese domestic map can be interpreted as overall Isozaki's cultural awareness originated from Japan domestic. Isozaki created contextual baseline with multi-level woven system.

VIII.2.5 Case Study – Robert Venturi

VIII.2.5.1 Vanna Venturi House (Pennsylvania, 1963-65)

Robert Venturi implemented his theoretical concerns through his mother's house. His design is awkwardly systematized to provide controversial illusion. This small project is representative in his earlier work that shows his theoretical concerns with his practical examination. Vanna Venturi House (**Figure 13**) is described for the "theoretical reappraisal of architecture" that "realizes and demonstrates most effectively the postulate

of complexity and contradiction.”⁸⁸⁶ Venturi created “ambiguity and the multiple-functioning element, idea expressed in Venturi’s *Complexity and Contradiction*.”⁸⁸⁷

Figure 13: Vanna Venturi House, Pennsylvania⁸⁸⁸



Identifying three level of formal system (Step 1)

(1) Taxis

The fundamental principle of Robert Venturi originated from his notion that opposes modernism that shows rational aspects of formal system. The essential principle as taxis is that his work seemingly provides the pluralism that holds the constitution of contradictions. The overall refusal of articulation can be seen in the exterior and interior formal configuration and the use of color code (unusual green) and materiality. These

⁸⁸⁶ Klotz, *The History of Postmodern Architecture*, 145.

⁸⁸⁷ Jencks, *New Paradigm in Architecture: The Language of Post-Modernism*, 1.

⁸⁸⁸ Source, Wikimedia Commons. http://en.wikipedia.org/wiki/File:V_Venturi_H_720am.JPG

are basic principles on how to configure architecture against the norm of rationalistic design of architecture that represents characteristics of modernism architecture. Venturi's strategy became taxis that guide vagueness of articulation by accelerating the fusions between architectural components. Venturi prefers angles other than right angles in order to place demarcation of space and building components. This distortion of axial direction is one of the major characteristic of Venturi's work which can be seen such as in Visiting Nurses' Association Building (1960). This formal system and his strategy conduct the organization of chaotic principle as taxis. The tripartition system has to be associated with these principals without having clear demarcation of tripartition of form but holding tripartition with vagueness. The relation in hierarchy of tripartition is not explicit. And, for the grand floor plan, a heterarchy in building components and arrangements can be seen. However, this chaotic treatment produces complexity that can be observable through the shifting perception. This phenomenon creates the further perception of contradiction. He intentionally plugged in this system in order to generate multi-perceptive illusions.

(2) Genera

The identification of genera has to be strongly associated with the system of his tripartition system abruptly but not explicitly. One of the major reasons of this observation is that he uses many eruptive insertions of mannerism within the hierarchy of tripartition. This notion of mannerism architecture is effectively introduced with this aspect. The distortion of geometrical form that supposed to be a reference of Palladian such as in façade design can be seen. The demarcation of the forms of genera is not simply provided. Rather he uses eruptive insertion including appears to be randomly angulated stair shape interrupting living space by reflecting the angle of walls between entry and staircase. Genera around the entry are treated with the manner of vagueness in the depth of space, the slit reflecting Palladian broken pediment referring to the slit with an arch shaped broken ornament. Other typical genera can be identified in this work includes courses on wall, modulated small size windows, sill window. The common characteristic of genera holds ambiguity of shapes and articulation.

(3) Symmetry

Predominantly façade is formed by gable roof, centrally located penthouse with the provocation of slanted roof, recessed shallow entry, and asymmetric allocation of windows are the elements that synthesize the relation of symmetry. The rhythm of symmetry is appears to be extremely complex with rhetoric of symmetry could be understood to the transformed reference to Palladio and commercial sign wall (billboard) of American domestic style. For the front façade Venturi intended to produce the double meaning in symmetrical form and asymmetrical composition of different size of windows. In general, façade holds duality: one is articulated level, and the other is ambiguous. The ornamental courses located above the base wall and the split arch shaped ornament coordinate openings including recessed entry, windows, and a slit of broken pediment while the courses are not articulated in terms of materials. They are blended with green colored walls. The horizontal rhythm of window and openings are complex with the assertion of vertical slit and rectangular recessed entry. This arrangement of components provides rhetorical interpretation with multiple levels. The penthouse with pitched roof looks to provide the concentration of building components with chimney and interrupted stair rather than expected vertical special openness. Slanted roof of penthouse, transom windows of rear side, and walls stand from grade level are coordinated together to produce connection. However, this connection does not include horizontal articulation such as floor line. Vertical articulation ignores horizontal cohesiveness. Therefore, the formal tripartition is intentionally modified. The way of symmetry supposed to create balance for normal situation. But, Venturi's way of symmetry appears to seek the basic condition that breaks this rule because of application of his taxis and strategy. This drastic coordination is applied to the interior as well. The most intensive treatment is on the layout of around stairs including entry area and chimney. Venturi does not allow the stair threads to align body movement with straight line. He twisted the stair while bumping against the chimney and narrowed its width and changing first thread angle so that the user will be forcefully guided to make maneuvers. The living area's ceiling design involves multi-vectored orchestration. Partially volt

ceiling was applied without having cohesive articulation of tripartition for the level coordination with eruptive insertion of stairs and other angled walls. Floor plan symmetry as coordination balance totally appears to be deformed in function and ordinal articulation. However, this coordination might be effective in semantics of his architecture and triggers psychological intensification.

Identifying three level of semantics (Step 2)

(1) Depiction

The first level of semantics, depiction is associated with non-conditional behavior of him that is talkative architecture rather than that of expressive with the various building elements. Before expressing the meaning of architecture Venturi prefers non-poetical communication of architecture as *decollated shed*. The indication of depiction can be understood directly and expectedly for observers. The sequential allocation of form and pattern are immediate depiction of extensional semantics. His use of astonishing element treatments such as unusual exterior color, slit, and the slanted roof at the penthouse triggers immediate attention because it is against an expectation that is flat roof. That turns to the arousal experience of observers as immediate *intensional* semantics. These depictions of semantics are observable in the contrast scheme within a context with abruptly manner that is incoherent in the form. For example, exterior materiality and color coordination is treated modestly like ordinal building at glance even if the unusual color uses of green and the minimized recession at the entry creates the feeling of flat shape. The depiction of the façade indicates ordinarily but incoherence of form that talks architecture some messages that will be discussed in the next paragraph, Representation.

(2) Representation

Venturi's general philosophy on architectural language is stressed on representation more than expression because he disdains the methods that create sculptural and formal articulation. The representation of his architecture therefore can be realized mainly through two-dimensional transformed scenographic treatment that can make semantics

of representation. His transformation of the architectural form to that of two-dimensional picture drawn on the façade is to realize a billboard and compositions of sign. The functionality aspect of sign associated with spatial concept is denounced and replaced by pop-art language. He realized the Vanna Venturi House awkwardly by compressing depth dimension, and provided functional sign of representation in an ironic way. In the case of extensional representation semantics his sign board is a pediment with slit that breaks bored plane gavel. For the *intensional* level representation semantics this broken pediment however introduces suggestion to cancel two-dimensional relations that consist of entry, lintel, arch, slit, penthouse, and chimney. All these lined-up relations trigger observable formalism behind the flat billboard façade ironically and simultaneously.

(3) Expression

Even if Venturi pretends his work is not that of expressionist as he explains in his writing,⁸⁸⁹ the symbolic aspect of his architecture has to be associated with his expression positive and negative both directions. Between an expression of architecture and expressionism architecture, we have different connotation and effect. While he pacified the effect of formal expression characterized as expressionist work, his work expresses postmodern architecture with mannerist point of view that express contradiction and complexity in a simultaneous way that can be seen in such his notion of ‘both and.’ By expressing dissonance in direction his explicit expression is dismayed in its effect, while implicit potentiality of expression triggers further enhancement of its power. The orchestration of dissonance in relations pervades the entirety of tension for the exterior and interior of the project. The subliminal feeling of danger (such as peril) and the incoherence between form and function explicitly expresses his design intention and philosophy—mannerism of his architecture. For extensional semantics of expression such treatment can be seen asymmetric configuration of windows and the location of chimney, and the obscured articulation of arch, lintel, and cornice in façade between two-dimensional and three-dimensional illusion, and the eruptive interior elements’

⁸⁸⁹ For example see, Robert Venturi and Denise Scott Brown, *Architecture as Signs and Systems: For Mannerist Time* (Cambridge, MA: The Belknap Press of Harvard University Press, 2004).

configuration, which can be seen as a conflict between stair and chimney. For *intensional* semantics of expression, he set the phenomenon of mannerism in experiencing these tensions to be intrinsically expressed in the project.

Identifying three categories of architectural identity (Step 3-1)

(1) Monadic architectural identity

Venturi published his theory, *Complexity and Contradiction in Architecture* in 1966. Just before this publication his mother's house, Vanna Venturi House was completed. In that sense this project is the showcase of his theory and the execution of theory was applied straight forward. His beliefs regarding the guiding principles of new mannerism at the time; this version of mannerism is anti-formalism, complexity, and contradiction. Impurity of formal treatments of juxtaposition was the basic theory of his monadic identity and his starting point for the departure to his ideal philosophical style, *maniera* against authentic formalism style. He was seeking the opportunity of his mannerist presentation in this project by reflecting this theory and providing explicit duality awkwardly. By doing so, he found the equivalency of his embodiment of theory in the project. This works as his principle "mannerism as complexity and contradiction"⁸⁹⁰ that defines the monadic architectural identity as axiom of his work contradictory to his position against modernist view of theoretical identity, which is also defined as a version of monadic architectural identity in the previous chapter. This innate contradiction is typically characterized as his taxis to configure the Vanna Venturi House.

(2) Dyadic architectural identity

Between dyadic architectural identities, opposing relations are configured. The opposing relations are chiefly rational verses emotional. Venturi explicitly demonstrated this conflicting duality in material, function, and form in this project. The actual selection of oppositions among the idea of collection of opposition shows evidences of what dyadic architectural identity he implemented in the project. For façade design, Venturi selected

⁸⁹⁰ Ibid., 73.

the duality of opposition symmetry verses asymmetry, two-dimensional verses three-dimensional, and penthouse verses roof shape. Symmetry verses asymmetry is relevant to the unification verses perplexity. Each element within the frame of pediment shows scattered allocation in size and asymmetric location of windows. But, simultaneously this perplexity is unified through a recessed entry with surrounded elements including a lintel, an arch, and a slit above. Furthermore, the courses on the wall connect both sides of windows. These exterior formal compositions have another layer of duality of picture verses sculpture—two-dimensional verses three-dimensional configuration and the use of ordinal material with extra-ordinal material color of green wall. For interior design, he highlighted duality in the location of stair verses chimney, flat ceiling verses volt ceiling, and right angle verses non-right angle. Obviously the location and functionality of stair is interrupted by chimney with axial deformation with non-right angle, and the volt ceiling is formed only partial otherwise no need to be volt shape. These explicit dualities must be meaningfully connected for Venturi's certain intention that is the source of dyadic architectural identity. That is his position to create meaningfulness within given context through *contrast* and *analogy*. The “contextual harmony can derive from contrast as well as from analogy.”⁸⁹¹ He found his dyadic architectural identities with this common Gestalt psychology strategy, and Venturi created contextual bases as well through this showcase.

(3) Triadic architectural identity

Venturi created contextual bases in this project. In that sense, the project is relatively isolated from surrounding environment explicitly and connected to this environment implicitly. Searching mannerism for the time is equivalent to value analogy of mannerism of his time, around 1970s and perhaps even now. The context of analogy of mannerism became an equivalency of culture of architecture and culture of postmodern architecture. For this reason, triadic architectural identity is projected on the context of mannerism. This context of mannerism should not be the same as the theory of

⁸⁹¹ Ibid., 7.

mannerism that is to stay as a monadic architectural identity. The context of mannerism is aligned with pragmatism that follows pragmatic maxim. Venturi created implicit context artificially through Vanna Venturi House because his intentions of design is the full of vagueness and contradiction without having actual contextual background but his mind background. It is an effective showcase of this philosophy. Triadic architectural identity is implicit and incomplete that can stay as dynamic as his mannerist mind shifted within this project. This dynamism can effect on his later work as well. Therefore, perhaps, the Vanna Venturi House can be the benchmark to measure his mannerist deviation among his work.

Identify shifting identity and explain 'hypostatic abstraction' process of the case (Step 3-2)

(1) Immediate interpretant

The grounding of primitive theory of Venturi's mannerism is based on the depiction of *analogy* and *contrast* in a context. *Immediate interpretant* of the Vanna Venturi House is explicated by the duality of these manifold directions as a whole. Peircean definition of interpretant is a sign (representamen) that facilitates sign process. Immediate interpretant is acting as monadic stage of shifting interpretant of this process. Immediate interpretant such as reflecting iconic sign can be conceived or constructed as a monadic architectural identity within in the frame of hypostatic abstraction. The innate unit of analogy and contrast creates this interpretant with the relativity system of hypostatic abstraction. The formal unit of tripartition is applicable as a universal system but it is subtle because Venturi applied as full of manifold units of analogy and contrast that triggers immediate cause of interpretant. For example, Venturi demonstrated immediate interpretant by presenting unusual treatments of elements such as split pediment in façade and deformed stair shaft in interior. These unusual elements are perceived at glance as a part and simultaneously as a whole within of tripartition structure ambiguously and awkwardly. Then, this kind of uncertain and unfamiliar situation naturally requires to be understood as a shifting toward coherent instead because of the estheticizing process of adaptation—

hedonic psychology. At this point this effect is similar to that of the notion of negative dialect that Adorno's inception and the desire of deconstructivist, but at the stage of immediate interpretant the shifting process still on the way. This experience could be arousal and might remain as dissonance at some level. Venturi's use of immediate interpretant is effective for the unconscious awareness for perceivers' mind.

(2) Dynamic interpretant

Venturi's notion of *inflection*⁸⁹² would represent the effect of dynamic interpretant—dyadic stage of interpretant for shifting interpretant. The relationship between part and whole with simultaneous recognition and valuation that requires work of inflection that enables us to perceive parts as dynamic components to a whole, while maintaining its individuality from a whole. The dynamism of inflection takes place at different scales by shifting the integration with wholes. Dynamic interpretant is another sign (*representamen*) processing active sign effect in dyadic stage. The Vanna Venturi House shows the implementation of inflection of architecture, and holds *contrast* and *analogy* at the stage of complexity to be unified whole. Significantly, individualized parts can make tension with strong integration to keep balance with the *wholes*. Wholes are multiple layers but the layers are not necessary to be hierarchy rather they can be heterarchy. When the stage of inflection is triggered, through dynamic interpretant parts are connected with wholes. Example of these parts can be differently sized windows that are asymmetry as the collection of windows are integrated as a continuous whole—entire façade framed toward symmetry. The contradiction between asymmetric parts and symmetric whole creates solution. Dynamic interpretant can be understood as the collection of same size widow and different sized windows combination. These windows are framed as tripartition in the façade wall. Peircean dyadic relation with secondness mode can be applicable for this situation. Replacing the result of hypostatic abstraction is always occurred when whole are replaced and parts are reconstructed because Peircean reduction allows to prepare dynamic interpretant as a unity of entities by

⁸⁹² Venturi's definition is "Inflection in architecture is the way in which the whole is implied by exploring the nature of the individual parts." See, Venturi, *Complexity and Contradiction in Architecture*, 88.

replacing players including monadic, dyadic, and triadic identities at some level. The result of hypostatic abstraction *at the moment* and that of the next moment are both *dynamic interpretants* of different stage. Each stage has different unity at a moment with specific entities. The windows' example shows as this unity of entities.

(3) Final interpretant

The emphasis on Vanna Venturi House is contrast and analogy, duality, parts and wholes. These concepts explicitly present dyadic relation. In a sense dyadic interpretant is a means to process between these two-sided polar. Venturi strategized two-sided conflict toward the notion of complexity and contradiction as mannerism of his version. Venturi found that “inflection accommodates the difficult whole of a duality as well as the easier complex whole. It is a way of resolving a duality.”⁸⁹³ Duality must be solved to be configured as complexity of whole. Now then, duality verses inflection must be clarified. In the truth of hypostatic abstraction according to Burch thirdness must be involved. On the sage of final interpretant being acting, it is highly likely that Peircean thirdness mode is acting on architecture, its tripartition, and the resolution between duality and inflection. And, Peircean thirdness mode permits the linkage between hierarchy and heterarchy tripartition. It is the same as between duality and inflection. Therefore, parts can make linkage beyond wholes including semantic of intension described in PAL. The examples of final interpretant regarding semantics of expression becomes back again to Venturi's notion of mannerism, complexity and contradiction. Entire project is a showcase to express thorough final interpretant.

Deduction of characteristics of case (Step 4)

(1) The element of scenographic

The elements being used as the negation of formalism expression are classified as the elements of scenographic of Vanna Venturi House. However, the distinction scenographic treatment from that of formalist is not strait forward. The two dimensional

⁸⁹³ Ibid., 94.

scenographic elements are simultaneously perceived as three dimensional construction so that his mannerism became capable in its complex context.

(2) The element of contextual

The element of contextual is twofold structure and both sides are associated with the stage of mannerism. The first contextual elements innate theoretical mannerism and the second is contextual mannerism. And in-between we would have the continuum of contextual elements. In a sense, context is the source to define the meaning of formal elements for architecture. Venturi recalls simple notions of Gestalt psychology with *analogy* and *contrast* that create contextual harmony. The elements, which have the relation towards context with this tendency, are to be categorized as the element of contextual. For Vanna Venturi House theoretical mannerism derives from the cultural background, vernacular culture, while contextual mannerism was developed on the scheme of actual design based on cultural background. Theoretical and contextual are reciprocal for some project, which is characterized more toward scenographic architecture like Sainsbury Wing, National Gallery Addition. Vanna Venturi House is contextual but theoretically.

VIII.2.5.2 Sainsbury Wing, National Gallery Addition (London, 1987-91)

Venturi postulates the problem between architecture and urban environment. This expansion can be also a part of this theory concerning complexity and contradiction in architecture. Architecture and a surrounding context produces reflective and refractive architectural language phenomenon. Sainsbury Wing, National Gallery Addition (**Figure 14**) creates an imaginary and sequential rhetorical harmony with existing urban context. Rhetorical treatment in classical form is transformed reflecting adjacent building styles. Simultaneously, this transformation appears to hold a characteristic of refraction within a classical base code changing rhythm of pilasters' interval of allocation. Each side of the building individually and collectively has this strategy aligning to each side of the environment. In the different context, "grammar holds

together and slightly transformed around its five façades.”⁸⁹⁴ This syntax includes the sequential movement with pilasters and the fading out windows.⁸⁹⁵ Venturi concerns contexts to form this language by belonging with his notion of complexity and contradiction in architecture.

Figure 14: Sainsbury Wing, National Gallery Addition, London ⁸⁹⁶



Identifying three level of formal system (Step 1)

(1) Taxis

Venturi picked this building as an example of explicit architectural Mannerism described in *Architecture as Sign and Systems*.⁸⁹⁷ For Venturi mannerism is underpinning his

⁸⁹⁴ Jencks, *New Paradigm in Architecture: The Language of Post-Modernism*, 180.

⁸⁹⁵ Ibid.

⁸⁹⁶ Source, Wikimedia Commons. Permission is granted under GNU Free documentation License.

http://ja.wikipedia.org/wiki/%E3%83%95%E3%82%A1%E3%82%A4%E3%83%AB:National_Gallery_London_Sainsbury_Wing_2006-04-17.jpg

approach to complexity and contradiction. The vectors of contradiction scatters and each syntactical rule express simultaneously in his work of complexity. Therefore, it appears that not only theoretically but practically he needs to choose his path as a mannerist through eclectic methods. These methods prefer pluralistic expression thus obtains legitimacy in mannerist expression. This particular project created unique axial scheme for the basic structure of the project facing to Trafalgar Square with the original William Wilkin's National Gallery built in 1830s. The structure of grid system in taxis corresponds with existing street structure and surrounding characteristics of existing buildings. The system of tripartition explicitly classical at glance, but extremely its syntax is transformed in order to fit his concept of mannerism. Therefore, the clear hierarchy of tripartition shifts to ambiguous relations changing tripartition interval and density through reference of existing William Wilkin's National Gallery. This project explicitly represents an analogy and contradiction of classical taxis at details and the contextual levels.

(2) Genera

Predominantly classical form of Corinthian Orders (pilasters) referenced directly from existing William Wilkin's National Gallery plays the role to form façade of the building. Main part of articulation constructed these genera that follows classical formal rule at details tripartition level, but deforms its allocation level by changing the interval as if perceiver projects illusions. On the eastside, Venturi inserted modernism vocabulary with a curtain wall system that shows reflection of existing William Wilkin's National Gallery for outside view. Simultaneously, the curtain wall glassing provides the function to see west side of this existing wall as if beyond the street to show the bridge as evidence that connects Sainsbury Wing. Venturi uses tripartition method explicitly including base, shaft and top entirety of the building form. The top form is covered with metallic roofing that appears to be rather modernism form. The use of genera therefore, in the foreground it is classical while in background it is modernism implication for the

⁸⁹⁷ Venturi and Brown, *Architecture as Signs and Systems: For Mannerist Time*, 99.

façade, while in the west side this relationship is shifted as curtain wall glassing as foreground modernism.

(3) Symmetry

The allocation of asymmetric treatment of façade can be the reminiscent of modernism within postmodern transformation that connects neoclassical form of existing William Wilkin's National Gallery and other surrounding traditional buildings. Venturi's theory on mannerism seems to be flipped between classic and modernism. In his writing of *Complexity and Contradiction*, his mannerism was explained by the examples of historical architectures in the era of Mannerism, Baroque, and Rococo to apply architectural expression implicitly. But here in this project his work has direct reference of classic form explicitly opposing under implicit expression of modernism. His strategy of *symmetry* as total balance can be seen through the asymmetric arrangement of classic vocabulary and the rhetorical sequence of located genera. He made extreme violation of rhythm of pilasters (Corinthian style) inserting the illusion of perception explicitly by doubling the pilasters and changing the interval eloquently. This arrangement is reminiscent of rear façade of Michelangelo's St. Peter's Rome. (Fig. XX) He reintroduced asymmetric modernism ironically through historicism postmodern architecture. The arrangement of genera with windows, pilaster, and other classical vocabulary shows similarity to his earlier work, Vanna Venturi House. He made a tension by locating large window with grid mullion in the left with the counter weighted allocation of complexity of compressed interval of pilasters on the right. An ambiguous cornice connects both sides to keep intentional vague unification. His sign architecture realizes meaning within a context and the context suggests him to select his strategy of *symmetry*.

Identifying three level of semantics (Step 2)

(1) Depiction

The depicted elements are directly referenced to this old gallery. The anticipation of depiction creates the sequential similarity at glance in terms of genera such as Corinthian pilaster and related classicism and the use of lime stone. The chief depiction is based on the analogy. However, sooner the later, irregularity of rhythm is easily depicted in terms of asymmetrical arrangement of façade that create arousal feeling. Venturi created duality of these formal level depictions as extensional semantics. By shifting scale including surroundings, the depiction can be extended towards the relation to *intensional* semantics. Depiction will be mentally associated with the old gallery's sequential perceptual association. Back-and-forth by changing the scale of depiction, perceiver can switch the mode extension and intension semantics.

(2) Representation

Venturi emphasized the contrast and analogy both in order to represent the complexity of mannerism through this project. Keeping harmony with materiality and the use of similarity of genera such as Corinthian pilasters explicitly, the façade as billboard is reflected from original William Wilkin's National Gallery of the 1830s. New addition façade represents a special position in terms of the continuity and discontinuity at the same time. Continuity representation can be seen from the use of same genera while discontinuity is opposing this by inserting other elements with the deformation. For example, windows between pilasters are faded in new façade like duplicated pilaster. The strategy of representation by Venturi is the reflection of that of old one. But within new façade this billboard has more layers, makes refraction by itself like a prism effect re-bouncing internal light. Extensional representation semantics is billboard with eloquent historical architectural language by distorted rules' application. Intensional representation semantics is reflected perceivers' mind that traces these re-bouncing sequential prism allocations. The meaning of architecture is corresponded with arrays, which are made of concatenated genera, which is a meaningful unit and articulated units.

In case of Sainsbury Wing, National Gallery Addition this articulation is developed with the hyper level layer.

(3) Expression

The façade expresses explicit postmodern classicism and implicit modernism. Venturi intended to produce shifting mode that makes inflection between existing gallery and new wing. This inflection realizes perceptual tension between them. The expression of the entire façade that includes old and new both galleries works as a whole that faces Trafalgar Square. Detailed articulation of façade elements expresses the perceptual experience of *inflection* between these detailed parts and whole. In addition, within the new wing façade distorted interval and details of Corinthian pilaster creates further layers of inflections. The structure of inflection has hierarchical for wholes, while for parts these are not necessary to be hierarchical. As the result of this phenomenon, inflection does not follow hierarchical structure. Sainsbury Wing, National Gallery Addition expresses significantly this result. The rhythm of composed in the façade is transformed rhetorically and loquaciously. The expression semantics of extension is the explicit formation of formal level inflection constitutes between façade of Sainsbury Wing, National Gallery Addition and that of exiting old façade. At the physical level, tripartition system is working hierarchically in terms of actual allocation of elements. But, metaphysical level tripartition system involves intensional inflection that follows heterarchy structure as well in addition to that of hierarchy. The expression semantics of intension is therefore anarchy and unexpected.

Identifying three categories of architectural identity (Step 3-1)

(1) Monadic architectural identity

Monadic architectural identity of Sainsbury Wing, National Gallery Addition can be approachable from the conversion of historicism architecture and mannerism of his version. This work should not be understand as revivalism rather it is relevant to historicism that claims history can understand only in present and future. The

interpretation is only possible through present mind. It can be similar to poststructuralist philosophy such as Foucault and Lacan's subjective interpretation on history. Venturi's monadic identity is associated with metaphor of his version of historicism that involves his version of mannerism. Therefore, taxis of architecture holds deformed grid system that has conformity with his concept of existing context. The tripartition system is increase and decrease horizontal proportion so that he can make sure architectural identity works with perceptive illusion. This is the mode of his rationale, explicit mannerism with historic vocabulary. The rules are within context, and that defined his identity by manipulating these rules. The interaction of internal and external rules of context was established in order to process monadic architectural identity.

(2) Dyadic architectural identity

The use of formal duality such as the duplicated treatment of pilasters implies meaning of duality in terms of articulation by pilaster and ambiguity of its treatment. These conflicting perceptions can be resolved by applying higher level of architectural identity. On the west side, these pilasters have broken rhythm as if the pilaster location represents the perspective view by changing the interval of horizontal tripartition. This setting creates the duality of exterior wall conflict as "both and" that can be taken as limestone wall illusion extending "perspective view of wall in depth" and actual curtain wall glassing. Venturi's dyadic identity is making a solution in this sense. The duplication is the key dyadic identity so that the conflict that two different wall materials (limestone with pilaster and curtain wall glassing) can mentally cover the west side of building. Venturi uses duplication and contradiction ("both and") for this identity.

(3) Triadic architectural identity

Venturi's creation of contextual format of this project is explicitly connected with the surrounding environment especially with original William Wilkin's National Gallery built in 1830s, and surrounding historical monuments facing the Trafalgar Square. At the same time, he adopted modernism context in order to have duality of complexity. Venturi recognized analogical context for surrounding environment. Especially original

gallery was directly adapted for this analogy. During the same period, Venturi introduced contrast within context in order to highlight perceptual effect such as inflection. This strategy was based on explicit mannerism rather than that of implicit. Therefore, triadic architectural identities were established by the context of mannerism explicitly as opposed to that of Vanna Venturi House.

Identify shifting identity and explain ‘hypostatic abstraction’ process of the case (Step 3-2)

(1) Immediate interpretant

Venturi uses familiar elements—Corinthian pilaster in order to have a confinement for the contextual purposes. In terms of legibility, classical vocabulary provided contextual consistency with the familiarity. The familiar objects are easily identifiable and provide markers to establish the reference to the representative elements of context. Within a whole of new addition and an entire whole including original existing National Gallery, this marker can be an immediate interpretant. This analogical effect of marker is however might be boredom as simple revivalism of historic elements. Instead, Venturi’s immediate interpretant was employed with both familiarity and avoidance of boredom. Pilasters are treated to be duplicated and changing interval of allocation along with other associated tripartitions so that the boredom is faded out and increase complexity level.

(2) Dynamic interpretant

Peircean interpretant is a sign, *representamen*, mediators, cultural unit, and so on. Many explanations can be applicable for the particular situation. Regarding the situation of architecture, I discussed as the analogy of tripartition in the Chapter VI – *Peircean semantics and logic*. There is the possibility that tripartition can be extended to the mental association beyond the formal system of tripartition. This extension allows the connection between interpretant and tripartition system, thus: the entire architectural formal system will be included if formal system of architecture follows classical formal system. Therefore, interpretation is projected by perception on the system of tripartition

including its structure in hierarchy and heterarchy. Venturi explained this phenomenon as the notion of inflection in architecture. Between distinctive parts and related wholes our perception creates linkages with multiple layers. We recognize a whole and parts simultaneously and dynamically. The established connection does not stay without oscillating scales and boundary of a whole. At the same time, objectified parts can be magnified its scale and boundary as well. This process requires dynamic interpretant associated parts and wholes. In case of Sainsbury Wing, National Gallery Addition, the effect of dynamic interpretant through inflection is exemplified between buildings and surrounding context including Trafalgar Square, between new wings and original building, between detailed elements of new wings and original building, and more detailed level within building façade. The scaled unification of elements contains parts within a boundary. These parts inflect beyond this boundary of whole in order to make connections to outer wholes. The unit of whole is always being changed in order to satisfy the arousal experience of perceiver solving some conflict and contradiction. This phenomenon is similar to that of the process of hypostatic abstraction. The resulting Peircean reduction is replaced hypostatically. This replacement requires a different set of monadic, dyadic, and triadic architectural identity at the moment in order to create next step. Once detail of Corinthian pilasters are recognized as a marking at the stage of immediate interpretant, inflection process will be stepped, and creates the linkages with a wholes such as rhythm of pilasters, entire façade system of symmetry, and further extended connection toward context level. Our perception is moving around and shifting dynamic interpretant following formal tripartition.

(3) Final interpretant

If the meaning is clarified, the solution of conflict and contradiction is made in order to form culturally accepted meaning that express architecture. In case of Sainsbury Wing, National Gallery Addition, Venturi expressed double coded mannerism and his version of historicism. The meaning of his architecture can be culturally accepted or not is seems to a question. However, behind this process underlined system is effective as final interpretant. This project is more expressive than Vanna Venturi House, and

scenographic elements are recognizable. But, there is underlined modernism view and anti-modernism if Venturi would accept this idea as his version of mannerism. This treatment of asymmetry and deformation of classical taxis can be understood avoidance of authenticity. This authenticity may derive from formal system of classical style of architecture and that of classical modernism. He made final interpretant that avoids both of them by laying the asymmetrical and aggressive rhythm of façade.

Deduction of characteristics of case (Step 4)

(1) The element of scenographic

Through the work of Venturi a mannerism thought is evident. The reason why a mannerism is necessary for his work is to shift rules and make works stimulate our perception in order to meet our psychological needs through hypostatic abstraction process and the involvement of three stages of interpretant to understand whole meaning of his architecture. This architecture is made from breaking existing normative rules. It must always be critically being established in all aspects that reflect architecture and the surrounding context. Normative rules are not only for modernism and classicism, but also established rules in a postmodern style as well if it does not have reflective critical process. This process is almost equivalent to that of pragmatism and critical regionalism. The scenographic elements work with the contextual elements and need to avoid normative rules. Thus, generation of new typology of architecture must be a controversial question for and against for Venturi. He was generating new architectural movement “architecture as sign” that works with context and pattern. The context and pattern is inevitably associated with categories and types. Eventually his work need be a part of a context and pattern. This contradiction is his oscillation and perhaps the origin of his creation intrinsically. In this sense, Venturi’s work holds the pivotal role between scenographic postmodern architecture and that of contextual that extends historical context of architecture and urban environment.

(2) The element of contextual

Such as neo-rationalism architecture holds the principle that expresses a tight connection with a historical urban context. Venturi's theoretical base showed these points of departure from the typological inclination and stableness in his notion of Complexity and Contradiction. In the case of Sainsbury Wing, National Gallery Addition Venturi fully used this treatise and expression in a particular urban context that involves historical ornament rather than decoration. The notion of complexity opens the choice to establish a new expression of mannerism while contradiction reflects its cohesiveness in a given context. Inevitably, critical mental process of its assessment must be inserted in order to validate its architectural experience in a process.

VIII.2.6 Case Study – Mario Botta

VIII.2.6.1 One Family House (Pregassona, Switzerland, 1979)

In One Family House (Pregassona) (**Figure 15 and 16**), Botta intended to realize “classical cube with a nine square Palladian Plan.”⁸⁹⁸ His intension of the association with nature, and possibly innate philosophy of *Tendenza* created his concept, “connecting earth and sky.”⁸⁹⁹ The significant contrast on site is realized by the symmetry of cubic form that emphasizes the depth of surface by adapting portico and windows.

Identifying three level of formal system (Step 1)

(1) Taxis

In addition to the basic classical taxis, Mario Botta's principle neo-rationalism derives from his philosophy, *Tendenza* that maintains there is a relationship between earth and sky. This dyadic relation is mediated through his architecture, manmade in-between. The relation is fundamentally triadic just like the system drawn by a principle of classical formal tripartition. This notion of *Tendenza* is similar to Heidegger's existential

⁸⁹⁸ Jencks, *New Paradigm in Architecture: The Language of Post-Modernism*, 120.

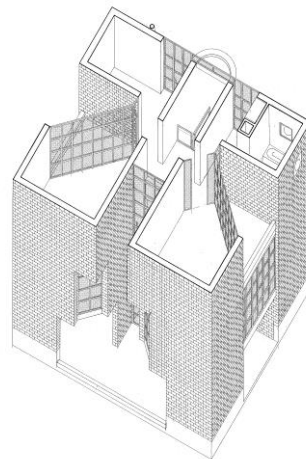
⁸⁹⁹ *Ibid.*, 121.

phenomenology regarding Ancient Greek idea of *technê*.⁹⁰⁰ Tendenza holds the principle of neo-rationalism that the architectural concept is independent from free-will to generate a subjective form making process. The notion of *type-form* brought a neo-rationalism of autonomous architecture derived from the philosophy of Tendenza that can be seen in the architecture of Aldo Rossi, Rob Krier, and Mario Botta. Because of the strong association of Tendenza with vernacularism, Botta's *School of Ticino* was influenced by this philosophy. Botta's taxis are originated from the connection to vernacularism and rationalism. Therefore, the local rules or customs are innate explicitly and implicitly. Botta's formal resemblance to that of Palladio defined the basic axial and tripartition within One Family House (Pregassona).

Figure 15: One Family House (Pregassona), Switzerland ⁹⁰¹



Figure 16: One Family House (Pregassona) – Axonometric View ⁹⁰²



⁹⁰⁰ Belgin Turan, "Architecture and Technê: The Impossible Project of Tendenza,"

<http://corbu2.caed.kent.edu/architronic/v7n1/v7n104c.html>, accessed August 3, 2013.

⁹⁰¹ The permission received from Mario Botta. Courtesy of Mario Botta. All rights reserved. Photograph by Lorenzo Bianda.

⁹⁰² The permission received from Mario Botta. Courtesy of Mario Botta. All rights reserved.

(2) Genera

The system type-form indicates archetypical forms and their variation may create autonomous architecture. For neo-rationalism forms are dealing with geometrical abstraction and transformed from various sources of cultural origin, but architectural concept associated with forms are permanent.⁹⁰³ The basic conceptual form of genera is thus unchangeable and adaptable under certain conditions of vernacularism and fundamental geometrical characteristics. One Family House (Pregassona) has basic cubic form, a repetitive form of curtain wall, and skylight windows for exterior. The materiality block wall itself represents rationalism of autonomous that reminds us of Kahn's principle dealing with materials – letting material speak. It reminds us of Luis Kahn was one of Botta's influencers, beside Le Corbusier and Carlo Scarpa. The interior walls predominantly occupy as genera to define the specific means of spatial demarcation. Spaces are classified along with Palladian segmentations based on the tripartition system.

(3) Symmetry

Geometrical symmetry appears to be Mario Botta's trademark of rationalism, and Palladianism like other works of his such as Casa Rotonda (cylindrical form), and Ransila Office Building (Lugano). For interior space Botta uses the basic principle of nine-square spatial arrangement. Façade designs are explicitly emphasizing Botta's philosophy – *Tendenza* connecting earth and sky by the seamless rising of openness of entry, windows, and skylight contrasting the remaining closed block walls. The treatment of *piano nobile* reminds us a classical formal system. And the deformation of tripartition in proportion characterizes Botta's mannerist tastes, and postmodern style. Because floor plans are strictly following geometrical symmetry, the inserted form deformation creates an arousal experience that connects our senses to be engaged in his work. For symmetry the contrasting treatment of material, formal deformation, and

⁹⁰³ Jencks, *New Paradigm in Architecture: The Language of Post-Modernism*, 119. Jencks calls this autonomous formal system as "New Abstraction."

context of site are involved as parts of his architectural configuration, which may have a conflict to his subjective *whim*, creative free-will.

Identifying three level of semantics (Step 2)

(1) Depiction

The formal simplicity of geometry confines the high possibility of depiction. Along with this sense, the cubic basic shape shows overall qualification of easiness of recognition. The depiction semantics of extension is associated primary with this aspect. Secondly, the boredom of simplicity is avoided by the slit curtain walls and the additive glassing of the skylight. Thirdly, the contrast of materiality such as glassing opening and rough block wall texture creates a sharp stimulation. The second and third aspects are relevant to the depiction semantics of intension that increase psychological affirmation.

(2) Representation

The articulations of form, space, and materials are represented for the means of contrast in certain contextual background of Ticino, the location in-between Italy and Switzerland. Botta's intention of contrast maybe the result of an emphasis on *Tendenza* keeping architectural concept unchanged while transforming the formal representation. In other words, contrast make meaning in Botta's architectural concept significant. Cubical basic geometrical shape standing on ground represents the contrast against nature physically for representation semantics of extension. The skylight opens to the air represents free-will for representation semantics of intension against grounding earth through connection of block walls. Botta divided spaces along with Palladian tradition, nine square components including void space to connect earth and sky. His transformation of space inducted the tradition of *Tendenza*. In the rear side of the same axial location he provided a staircase that represents functional connections from earth to sky along with this void space for representation semantics of extension. This void space is covered by a curtain wall system represents the contrast to block walls. Walls are heavy material by contrasting glassing skin extensionally. Materiality of walls for

representation of intensional semantics might be representing his will to set his artifact on the ground existentially to *cut off* place by this secret temple like architecture.

(3) Expression

Neo-mannerism expression for One Family House (Pregassona) deals with deformations in the formal applications, the spatial arrangements, and the meaning of materiality existentially. Botta expresses One Family House (Pregassona) as classical architecture for Tendenza, but not classical style of architecture. The architectural concept of Tendenza is immutable, and the form he applied to its application. However, when he applied his creation the specific contextual interpretation of site and the meaning of architecture must be accentuated. For One Family House (Pregassona) geometrically rigorous symmetry is a direct rhetoric of classicism that maintains the goal of his Tendenza—concept of architecture for expression semantics of extension, while confining his creative will against this tradition for expression semantics of intension. This type of controversial is similar to Venturi's notion of *complexity of contradiction*. Botta expresses contradiction through direct simplicity of form, space, and materiality in contrast to that of Venturi. For example regarding materiality, does the context of Ticino allow him to use similar materials Venturi used? This question might trigger the architectural concept and the application of form including materiality to provide actual form. The selection of materiality will be objectively beyond the individual architect, and comes with vernacularism and context.

Identifying three categories of architectural identity (Step 3-1)

(1) Monadic architectural identity

Neo-rationalism architecture in a sense aims singularity rather than plurality of architectural ornaments and styles. This theoretical underpinning itself becomes an identity that defines the goal of architectural concept which is immutable. Mario Botta explicitly uses this point for One Family House (Pregassona). The building is standing alone on the site without any formal connections to other building in nature. He could

use whole set of singularity for the realization of Tendenza in terms of concept of architecture—*cut off* of a temple space from the remaining world.

(2) Dyadic architectural identity

The notion of *technê* is associated with tectonic and materiality as oppose to aesthetic aspects of architecture. The selection of materiality for One Family House (Pregassona) is aligned to dyadic architectural identity of Botta. The relation of earth and sky is architecturally realized with the relations of forms that defines materiality each other. This dyadic relation efficiently defines the causality of the material selection beyond the subjective mind in the context of site, vernacular, and cultural settings.

(3) Triadic architectural identity

When architecture is elected, the final appreciation is associated with aesthetic realm of secrecy. The characteristics of this aspect for One Family House (Pregassona) can be seen through Botta's strong conceptual approach expressing clarity of his message. This message is not that of scenographic multiplicity. The essential aesthetic of this building is rather that of ethical elements innate to his philosophy as singularity and the appreciation of tradition. His neo-rationalism philosophy influences the building internally and vernacularism is parallel to the building externally contextualized. In-between the result of architecture mediates internal need and external condition. This satisfaction derives from his triadic architectural identity of One Family House (Pregassona) at the site of Ticino.

Identify shifting identity and explain 'hypostatic abstraction' process of the case (Step 3-2)

(1) Immediate interpretant

Possible clarity of meaning of architecture for One Family (Pregassona) can be an immediate connection to massiveness of walls composing primitive form of singularity. This singularity also means the principal concept of Tendenza. Mario Botta's intention to persist his architectural concept expresses immediately through materiality of wall. It

at first seems stable as immediate interpretant. Another immediate interpretant can be recognized, openness with glassing that allows visual circulation. The windows connect inside and outside so that the building can express relations between contained beings and surrounding beings. Both immediate interpretants are valid entities individually in the certain face and level of hypostatic abstraction.

(2) Dynamic interpretant

The oscillation between neo-rationalism (grounded architectural concept) and irrational creative freedom (neo-mannerism) during the process of type-form generation and that of perception are critical aspects for dynamic interpretation. Generation is parallel to perception as reflective process, and the act of generation follows conception, which originated from rationality and logic. Meantime, irrational creative freedom seeks creative conception thorough breaking rules of previous rationality. Dynamic interpretant is the result of this type-form generation underlined by this oscillating process. Botta oscillated between rational mind represented by primitive walls and irrational treatment of openness and the associated wall location deformed angle choice. Botta's type-form selection is therefore the reflection of dynamic interpretant.

(3) Final interpretant

Defining the form selection is a reductive result, and simultaneously it is a reflective beginning after the mediation by an interpretant. This process is also transitory-ness that addresses an ending to be a possible beginning. While conceptual persistence of rationality maintains the principle philosophy, another layer of concept towards formal selection must be reduced. This appears to be controversial in a normal sense of reduction. Peircean hypostatic abstraction is a reduction process in Peircean sense. This reduction takes this contradictory process through the replacement of entities combinations including monadic, dyadic, and triadic identities. Analogically, architectural identities of monadic, dyadic, and triadic are applied and examined. Its possibility as I described the model setting in the above sections in this chapter. Botta's final interpretant of One Family House (Pregassona) is the result of form selection that

followed hypostatic abstraction crystalizing diversified form to complete reflection of Ticino's cultural condition. The forms—*final interpretants*—are extremely aligned with materiality and the characteristics of primitive objectivity associated with the site of Ticino.

Deduction of characteristics of case (Step 4)

(1) The element of scenographic

In case of One Family House (Pregassona) the element of scenographic is hard to define because of the strong inclination towards the expression of objectivity reminding us of German New Objectivity. Obviously, materiality dominates the whole building. One of the few elements of scenographic may be captured in the treatment of glassing changing size and angles. Especially, the skylight coverage provides the unseen image poetically.

(2) The element of contextual

The use of material for block walls appeals to the existential value for physical and metaphysical on both levels which is continuous from the site that influences the total aspect of One Family House (Pregassona) ontologically. Physically, walls function to define the territorial boundary of inside that is protected from undesirable nature. Metaphysically, walls are symbols to demarcate the boundary to cut off the secret space from the remaining world. Another primitive material, glassing is inserted as if it becomes fragmented discontinuation of these walls physically and metaphysically. Physically it provides circulation of sunlight from the site. Metaphysically it creates the connection to the freedom of sky. Walls are restriction that connects earth, while glassing invites the image of freedom in the sky. This contrast defines One Family House (Pregassona) significantly as context burdened architecture.

VIII.2.6.2 Ransila Office Building (Lugano, Switzerland, 1981-85)

Once architect and architecture depart from the origin of site, the totality of meaning would be shifted even if the basic formal treatment is maintained. Botta's departure to a new context of site developed new phases of his work blended and communicated with a

new stage of environment. Ransila Office Building (Lugano) (**Figure 17**) established his work within the postmodern architecture category as a tradition like other postmodern architects' symbolism such as in Johnson, Pederson, and Pelli according to Jencks' framework.⁹⁰⁴ The origin of Tendenza was shifted to the metropolitan environment. Ransila Office Building (Lugano) is one of these examples and shows universality of his architecture within a frame of Post-modern architecture. The similarity of formal treatment with Casa Rotonda can be seen by changing cylindrical to cubic. The context of site provided the opportunity to emphasize the meaning of corner on architecture. Similar to Casa Rotonda's column shape and One Family House's (Pregassona) recessed portico building surface maintains the depth to express the richness of materiality and spatial configuration of form with symbolic treatment. Jencks described that the symbolic ornament in Ransila Office Building (Lugano) "mixes basic stepped forms with brick construction, a primary-shape grammar (circle and squares) with vestigial moldings, and the extreme mannerist contrast of interior technology erupting through an exterior envelop that looked permanent."⁹⁰⁵ The illusion of permanency of architecture may provide the new domestic meaning on site.

Identifying three level of formal system (Step 1)

(1) Taxis

The connection to a site and the principle of architectural concept deals with external and internal fundamental bases to find appropriate application of formal treatment. Botta's Ransila Office Building (Lugano) provides an example how he maintains and shifts architectural conceptual layers. In other words pure conceptual through formal application there is multiple layers of taxis levels. These are appears to be controlled hierarchical for Ransila Office Building (Lugano). This implies the use of mannerist way is less important for this building. The grid system is maintained as geometrical symmetry with the diagonal axis. Along with diagonal axial and street defined axial the

⁹⁰⁴ Ibid., 143-151.

⁹⁰⁵ Ibid., 149.

grid system is defined. The system of tripartition deals with detailed material treatment, even if Botta uses materiality selectively.

Figure 17: Ransila Office Building (Lugano), Switzerland ⁹⁰⁶



(2) Genera

Because genera are allocated based on the three axial directions including the two along with street, and one by diagonal from the corner of the building at the crossing, the relation to the three axes nodal points is emphasized. Genera located on these points have special treatments. The relationship genera and their materiality are concerned by

⁹⁰⁶ The permission received from Mario Botta. Courtesy of Mario Botta. All rights reserved. Photograph by Alberto Flammer.

this emphasis. Botta's genera can be analyzed by differentiating hierarchical versus non-hierarchical genera. Walls used such as for One Family House (Pregassonna) and Casa Rotonda are defined predominantly by the primitive geometry of cube or cylinder. They have tendency to be non-hierarchy with plain surface and totality of shape except the treatment dentil fries molding at Casa Rotonda. In case of Ransila Office Building (Lugano) the walls are more articulated based on the hierarchical structure. Through overall and detailed level many layers of hierarchy are configured as the system of tripartition that makes layers of frames and adjacency of materials in order to form totality of architectural elements.

(3) Symmetry

The three axial directions and that of one vertical underpin the formal system regarding symmetry of the entire building. The repetitive elements and their rhythms are creating continuation and termination. These formal treatments of symmetry are the defined hierarchy involving exterior walls, framing ornament of windows, and the ending of wall discontinuation. The vertical arrangement of the exterior wall is coordinated in a similar way of hierarchy of that of horizontal. The parapet design is completed with rhythm of round windows. There are terminated at the merging point at the corner leaving open preparing the adaptation of directional changing of diagonally symmetrical geometry.

Identifying three level of semantics (Step 2)

(1) Depiction

For depiction the legibility of forms are critical characteristics. These are relevant to analogy of form and its arrangement. Perceiver's expectation can follow this kind of visual vector. When the analogy is twisted it would be also legible because of clear disruption. The same method was used for One Family House (Pregassonna) with the zigzag walls making a contrast. The depiction of extensional semantics can be seen at such genera including, brick covered walls, ornamental frame of windows on the walls, circular windows at parapet, and the termination of these formal analogy. For the

depiction of intensional semantics, these formal allocations of analogical easiness and contradiction at the termination stimulates perceptive effects in order to bring back to a rational conception of mentally hierarchical manner at representation and expression level of intensional semantics.

(2) Representation

The articulated genera are conformed to the hierarchy of representation. Sequential form allocation creates horizontal and vertical marking to guide a perceptive sequence. This sequence is composed of four axial linear relations including two for horizontal along with street direction, one horizontal angled 45 degrees, and the vertical from through ground and roof level. For the representation of extensional semantics these four sequences provide the repetitive genera's appearance that defines boundary of wall surface and its relevant formal hierarchy, the directional formal setting with 45 degree angled, and three directions of column repetitions. Columniation is reflected by 45 degree angled direction and coordinated with walls and shaft location. Regarding the representation of intensional semantics, perceptual sequence along with formal sequence captures anticipation of repetition and interruption of those. Especially, disjunction of walls that covered terminated window and wall surface hierarchical repetition can generate further anticipation of seeing hidden inside through a glassing system. These formal vocabulary and psychological relations are working as arousal experience. In a sense this is lack of walls and windows. This lack creates more curiosity of human perception and contrast within the repetitive mental sequence.

(3) Expression

Totalized expression of Ransila Office Building (Lugano) must be analyzed from the contextual point of view. This brings an analytical scheme back to the philosophy of Tendenza and neo-rationalism. Architectural conception is not changeable while architectural forms are adaptable in the various situation of context. If context is interpreted a certain way, forms are following the interpretation by diversifying and adapting to a new situation while primitive rules and logic are maintained. The

expression of architecture therefore maintains archetypical conception persisting neo-rationalism. Conceptualism emphasizes binary contradiction in the various forms and finds the reading. The challenge of Ransila Office Building (Lugano) exists between the original philosophy of Tendenza and its formal adaptation to the urban context. Overall spatial concept including geometrical symmetry, centrally located zigzag openness, and shaft form at the center of the façade, and articulation of cornice and freeze are all similar to his other buildings located in more remote areas. His architectural language vocabulary and syntactical application is reminiscence to earlier his work in a different contextual background. The methodology of expressions is universalized under the principle due to the representation of extensional semantics as well as the persistence of architectural concept. Instead, regarding representation of intensional semantics Motta made an intention to create contrast and fragmentation within the existing urban context. This strategy can be seen in the use of materiality, layers of hierarchical tripartition, and complete symmetry in geometrical form. These are sources of classism that we can be seen in tradition. Motta intended to express his architectural concept of classical rationalism through Ransila Office Building (Lugano).

Identifying three categories of architectural identity (Step 3-1)

(1) Monadic architectural identity

What can be sure for the origin of architectural conception? Between the evidences which are a priori and posteriori our rationality would be defined. For Pragmatism approach, this might be a starting point of the process of finding a truth regarding being of architecture. The notion of type-from process provides us a priori and posteriori methods in order to find the appropriate form of architecture in a certain situation that derives from the interpretation of context guided by a language theory of architecture. Persisting architectural conception as his theory is held on the one hand, while on the other an application of form is definable reflecting the relation to the context. This is a paradoxical situation because an origin of architectural conception is also a result of an interpretation of a priori of context derived from collective interpretation of existing. In

the case of Ransila Office Building (Lugano) this exists, for Mario Botta is undoubtedly an interpreted urban structure of the site. His architectural conception is strongly relying on this existing. Therefore, monadic architectural identity of Ransila Office Building (Lugano) derives from rationalism reading streets and surroundings rather than his mannerism interpretation from archetype of architectural conception for this project. He emphasized his theory, architectural conception of *Tendenza* by additional axial alignment in 45 degree.

(2) Dyadic architectural identity

Reading urban structure as the contextual base for Ransila Office Building (Lugano) is articulated by asserting the treatment of contrast. Like Venturi, contrast and analogy are the means of realization of architecture not only for the perception of Gestalt psychology but also for the reality of other layers of architectural hierarchical composition. When dyadic relations are recognized as contrast, it would be conflicting relations to be a departure towards a problem solution. Defining a form to make boundary is to provide a marker to differentiate and cut off a territory from the universe. This form making can be perceived as contrast in the contextual situation. Mario Botta uses this strategy to make articulation of form for defining architectural conception of Ransila Office Building (Lugano). Dyadic architectural identity thus obtains its legitimacy by emphasizing many contrasts of materiality, formal fragmentation, and functional differentiation.

(3) Triadic architectural identity

What is the final purpose of Ransila Office Building (Lugano) for Mario Botta? This question can be substituted by the morality of a building existence. The aspect of transitory-ness of formal generation and interpretation along with a language theory bring him and his work of architecture to the origin of his philosophical underpinning. The ending purpose is to be reduced to the intention of beginning. He created a building that is morally acceptable for him, community, and surrounding contexts. This condition coincide his identity regarding Ransila Office Building (Lugano). Meanwhile, contextual ventricular and cultural underpinnings are involved with the process of creating identity.

The reciprocal process inner identity and collective others' identity further influenced his realization of architectural identities. All this process will be mediated as triadic architectural identity. Therefore, triadic architectural identity will be a part of three modes of architectural identity including monadic architectural identity which deals with the theory of Tendenza, dyadic architectural identity which emphasizes contrasts within a context, and triadic architectural identity which mediates collective architectural concepts developed by cultural experiences of the site. The process to combine these three architectural identities will be realized aligned with Peircean reduction, hypostatic abstraction to conform the continuous replacement of interpretants of Botta's architecture. This continuation has condition of neo-rationalism and morality that holds persistence of monadic architectural identity that can be called as theory of Tendenza. All others including dyadic and triadic architectural identities will be replaced when the reduction was made.

Identify shifting identity and explain 'hypostatic abstraction' process of the case (Step 3-2)

(1) Immediate interpretant

The work of Mario Botta can be depicted because of characteristics of his primitive concept in use basic formal geometry. When we interpret context whether we interpret what we depict. What would be the condition beyond that? Immediate interpretant is about primordial sign and representamen depicted before interpretation was made. The architect's intention is to be perceived by others who are surrounding Ransila Office Building (Lugano). These perceptions are associated with the use of materials and easiness of legibility derived from primitive form and functionality. The recognition is also strongly relevant to Botta's selections of these in order to make contrast in a context. For example, Botta configured simple but multiple axial with overall primitive cubic form. The materiality of brick cladding is contrasting against surrounding building materials in terms of formal configuration such as discontinued coverage, although it is common to use for shelter layer. The articulation of repetitive tripartition of walls and

glassing are relatively constant. That is legible to the perceived. These described units of tripartition are immediate interpretant of Ransila Office Building (Lugano).

(2) Dynamic interpretant

The characteristics of contextualism rely on the reading on a context as a universal idea. Implementation of reading relies on the narrative sequence that allows us to follow some level of contingent instead. Naturally, contextual burden neo-rationalism has innate dynamism in terms of the process of reading. The result of reading is formalized by Botta to consist of his work of architecture, and configured within the surrounding context. Then, his work is assembling Lugano's site as a part of the elements of its contextual meaning creation process. Botta's possible intention and intensional semantics that keeps architectural conception as morality inevitably be examined internally and externally. The perplexity of each process of this examination shows dynamic interpretant that further reexamines the practicality of his morality in terms of construction of architecture with context. Dynamic interpretant of Ransila Office Building (Lugano) is a showcase and confinement of contextualism architecture within Lugano urban site. This testing involves durability of formal assessment including the element significance, the appropriateness of materiality and the functionality, and spirituality. This assessment of dynamic interpretant is corresponding to the replacement process of hypostatic abstraction.

(3) Final interpretant

The dynamism of interpretant is a condition to reach a truer conclusion through a morality examination regarding the relation between Botta's architectural conception and his formal application within the context of Lugano urban context. The final interpretant is the result of this process took complete involvement of cultural value system of Lugano. This process can be generated by architectural analogy of Peircean hypostatic abstraction, Peircean reduction. When the condition is met, this cultural value was configured with Mario Botta's architecture. This transcendental reality has to be

accepted by the community of Lugano's spatio-cultural identity. The symbolic aspect of Ransila Office Building (Lugano) has this potentiality.

Deduction of characteristics of case (Step 4)

(1) The element of scenographic

Mario Botta expresses his architectural theory that perseveres the origin of Tendenza. This consistency was possible by the notion of architectural conception internally. It is relevant to the intensional level semantics. The representation of this intensional concept must take concrete applications that realize physical and formal level extensional level semantics. Botta selected classical architectural conception that is suitable to be transformed to the application. The element of scenographic selected for Ransila Office Building (Lugano) was already scenographic in terms of this affiliation with the classicism and the level of legibility because of formal simplicity. In addition to this condition Botta's selection of scenographic elements are strictly limited with hierarchical structure for his use of syntax and materiality.

(2) The element of contextual

What will be changed and what will be remain in terms of spatio-cultural identity. Botta's will to be consistent against a possible future transitory-ness must take an action. The element of contextual therefore plays the role of bipolar system that keeps permanence and the other express the conflict with continuation of spatio-cultural changing. In order to be contextual he needs to focus on the principle and contrast expressing the contrast. The reduction of the element of contextual therefore became archetype and contrast in a context rather than harmony with the contextual requirement. This is a controversial and contradictory way to communicate with a contextual site for Mario Botta.

VIII.3 Result of Case Study

I developed the simplified conceptual model of Peircean Logic through an analogy between Peircean Algebraic Logic (PAL) and Classical formal system of architecture. The underlined concept is a plausible similarity between Peircean notion of *interpretant* and the notion of *tripartition*. This similarity is based on the bridge that allows us to understand both *interpretant* and *tripartition* as the source of logic and thoughts; thus, both entities are *signs* in Peircean *semeiotic*. And, this connection is that of the notion of oscillation that shifts our mind relation between architectural form and mental activity. The established *Conceptual Model of Peircean Logic* (CMPL) facilitates this oscillation triadic way with the aid of the notion of *hypostatic abstraction*. The results of this model made a valid articulation regarding the systemic process to analyze work of postmodern architecture. The elements of this articulation includes: (1) existence of formal system of architecture, (2) meaning of architecture, (3) language of architecture, and (4) signification of postmodern architecture through *hypostatic abstraction*.

The existence of a formal system of architecture is articulated with the analogical connection between Classical form of architecture and extensional semantics of CMPL. Architectural formal system including taxis, genera, and symmetry configures the three levels of formal semantics. These semantics are induced by the architectonic systems consist of depiction (monadic), representation (dyadic), and expression (triadic). Tripartition penetrates these formal semantics explicitly. The existence of meaning of architecture is induced and articulated with the analogical connections that involve an architectonic system and *intensional* semantics that includes three levels of architectural meaning that: *depicts immediately*, *represents dynamically*, and *expresses as final*. The image of architectural language in Peircean mode is the result of the unification of three systems that includes: (1) architectural formal system (tripartition governed system); (2) the relation between architectural formal system and extensional level semantics (CMPL for architectonic system semantics); and (3) the relation between architectonic system and intensional semantics (CMPL for mental activity).

Finally, the articulation of a language of postmodern architecture is signified by the process of hypostatic abstraction within CMPL. Hypostatic abstraction is a meaning clarification process to implement the sign process of difference through immediate, dynamic, and final interpretant process. This process induces the goal of architectural language that is guided by Pragmatic Maxim with the association of architectural identities, which includes monadic, dyadic, and triadic. Therefore, identity becomes core elements for architectural language. This theoretical implication depicts the limitation and the inflexibility of negative scenographic postmodern architecture, which has only proxy signification system (lack of signification and desire of its fulfillment) such as in deconstructivist postmodern architecture.

The use of CMPL for the analysis of a multi-case study made fruitful results in terms of the interpretation of works of postmodern architecture that consists of four architects (as contexts) and eight architectures (as cases). Summarizing this application of CMPL to (1) postmodern scenographic architecture, and (2) postmodern contextual architecture, I present the following findings as general characteristics of above two postmodern architecture categories and the role of CMPL:

- (1) Postmodern scenographic architecture has a language system that is developed within one's system that would make a triadic figurative relation immediately. This system has a tendency to emphasize monadic mode of architecture with picturesque and postmodern mannerism.
- (2) Postmodern contextual architecture maintains one's monadic theoretical view, while seeking dyadic expression including conflict that would be mitigated in the triadic relation. This system is commonly explained by the view of dyadic language that uses oscillation and critical regionalism architecture. By utilizing triadic Peircean view, this oscillation mechanism is explainable with articulated and truthful manner such as with the notion of hierarchy and possibly anti-hierarchy (heterarchy).
- (3) The notion of architectural identity though Peircean interpretation is articulated to three different modes with the aid of *hypostatic abstraction* of

CMPL. The better understanding of the relationship between architectural identity and the system of an architectural language validates CMPL and the Peircean interpretant as effective means to analyze postmodern architecture. This result shows the plausibility that triadic architectural language though Peirce better supports the understanding an architectural language compares to that of dyadic system.

CHAPTER IX

CONCLUSION

I analyzed the following three areas based on the set hypotheses: (1) the appropriate consideration regarding the phenomenon of oscillation of architectural theory and creation between universality and locality, (2) the recognition regarding the insufficiency of Saussurean dyadic language for the explanation of postmodern architecture, and (3) the architectural semantics and logic based on Peircean triadic sign theory that plausibly and sufficiently explains truthfulness of postmodern architecture.

(1) The appropriate consideration about the phenomenon of oscillation

The oscillation between rationalism and romanticism was described along with a history of architecture since the nineteenth century illustrates evidences that have woven linkage between philosophy and architecture. I focused on architectural transit mode that formulates various ways of shifting and oscillating phenomenon. Investigation on the relations of philosophy and architecture is one of them. The phenomenon of oscillation in architecture derived from the essential philosophical intricacy of human understanding of universe. In fact, postmodern philosophy itself is an inquiry upon the validity of this universal knowledge and the way of understanding of our world including ourselves collectively. Architects attempted to realize their ideal buildings through aesthetics, materials, and conception unfolding philosopher's insights. The dimension of oscillation prevails all of these aspects, because it is a critical process to determine the form of truth for human beings. The idea of a truth is intrinsic to architectural ethical value that makes our culture and society, which leads us to a proper way and truthful results in creating architecture. The way to define an architectural truth is not that of dogmatic authoritarianism. It is a critical and reflective determination process, which is infinitively open to both sides: enlightenment and counter-enlightenment, rationalism and romanticism, with emancipation. In architecture, this openness was splendid movements and diversification of styles through authentic

classicism, rational modernism, and critical eclecticism at each period. The process of oscillation prevents our dichotomy of *mind and body*, *subjective and objective* problem. Thus, philosophy as the solution to creativity of architecture should be focused on in order to make a better understanding of architecture without distorted interpretation. For that purpose American Pragmatism was chosen along with semeiotic theory by Charles Sanders Peirce because of the essential principle philosophy that is called Pragmatic Maxim.

When our society experienced the dispute of enlightenment, language became an important means of thoughts instead of universal modernism. A dimension of language has also two-fold of rationalism (such as structuralism) and romanticism (such as poststructuralism). We have accepted the presumption, *architecture parlante* in histories of architecture at the beginning of Modernism Era, especially during neo-classical style architecture such as Claude Nicolas Ledoux. Philosophical underpinning of this utopianism was rooted from enlightenment and rational idea. The need for language derived from philosophy of emancipation chiefly of Benjamin and Adorno. Kantian idealism and Hegelian dialectic were investigated in order to pursue further understanding of our needs on society. These philosophers are philosophical materialism who valued human's free mind to emancipate form political authenticity, thus they were drastically romantic and critical. Therefore, it is coherent to set our mind in a way of understanding architecture confines the way of language. Tafuri and the Venice School architecture were aligned with philosophical materialism. A language of architecture became foreground after the 1960s again to express postmodern architecture. Architectural theory legitimated its needs as a reference to the theory of linguistics and sign that was swung to rationalism again. Namely, the rationale was the influence of structuralism. The new intellectual philosophical framework after the 1960s was called structuralism that overwrites subjective French existentialism. The influence of anthropologist Lévi-Strauss and linguist Ferdinand de Saussure created a new framework to understand the woven social phenomenon through the system of structure

called structuralism. Structure defines meanings from outside of social system. This rationalism prevailed in architectural theory that linked with Saussure's semiology.

Once again, in architecture this enlightenment had a counter reaction as post-structuralism movement that coincided with postmodern philosophy. Postmodern philosophy questioned *grand narrative* then language theory reflected as indeterminism. This movement was toward romanticism. However, this swing required another counter reaction that led our scope in the different way. The ideal of permanent value through these philosophies again required the new philosophical underpinning rooted from existentialism, chiefly Heidegger's Dasein. The concept of Dasein indicates monadic inner experience of *a priori* existence as opposed to Husserl's intentionality. Thus, language became singularity of 'experience' rather than symbolic manmade object. Dasein resides in Dwelling with certain scale. This scale is shifting our cognition of being, changing our view near or far to Dwelling. However, this existential experience has to be beyond individual subjectivity, and be valued in a context that eventually led our cognition to an un-humanistic framework of architecture as well as cultural and historical context of site. This rationale was delivered to the theory of architecture as existentialism architecture. This architecture is strongly contextually burden. Neo-rationalism and critical regionalism architecture inherited this characteristic.

The oscillation of our mind to associate with and express views continues beyond the difference of architectural movements as underlined human needs. Nietzsche's notion of 'the will to power' and 'the will to form' sustained his version of truth with the combination of nihilism remaining its influence on desire of architecture that is notorious as un-human and ill-formed architecture for positivist theorists. Nietzsche influenced both modernism and postmodernism. Modernism architecture was idealism and functionalism free from neoclassic architecture; postmodernism is an expression free from authenticity of modernism architecture. Architecture therefore must remain within the modes of oscillation between enlightenment and its reaction, rationalism and romanticism. These dichotomies must be transcended to reach clarity to understand architectural language. Phenomenological philosophy and psychology such as Merleau-

Ponty attempted to overcome this dichotomy by inter-subjective methodology called *phenomenological reduction*. Nevertheless, this trial was fundamentally bypassing the oscillation process by setting dichotomy to an idealism of singularity that unifies mind and body. The shift from Heidegger's existentialism to philosophical Hermeneutics, such as Gadamer captured the problem of singularity by emphasizing dialectic understanding, the concept of understanding with pre-judgment and anticipation that allows us to reach 'truth,' and the linguistics involvement. Linguistics and hermeneutics experience were unified to share truth ideal. Therefore, language was anticipated to be a solution of a dichotomized worldview. This view is closer to deterministic thoughts. Thus, language is legitimated for the means of architectural expression.

While philosophical hermeneutic took a closer view of determinism, postmodern philosophy dealt with uncertain knowledge claiming a loss of grand narrative. Philosophers claimed the legitimacy of knowledge. They found there is no universal truth; there is however, a partial truth called local narrative. As a counter reaction of structuralism, poststructuralism extend the system to be 'measured' but not determined by structure. The method of '*measurement*,' which I shall call, varies among the philosophers such as Lacan, Derrida, Barthes, and Deleuze. The common characteristics of them appear to be a 'measurement' (such as tracing for Derrida) of '*difference*' that applies to subjects such as texts. The difference of structure must be made by transformation; the difference of transformation must be found in deep structure of generated text; difference must be repeated; difference must be in a lack of fulfillment through psychology. This idea of *difference* includes such expressions as: deconstruction, fragmentation, disjunction, and complexity. One of the ways in architectural language, the idea of undefinable meaning reflected with pluralism that is common to postmodern historicism, postmodern classicism, and postmodern eclecticism. Another architectural language was inducted from the idea of 'difference' for the expression of architecture. Deconstructivist architecture and postmodern radical eclecticism adapted this method of expression. Currently, this movement still appears to be continuing. The effect of oscillation is constructed within the method of measurement.

(2) The recognition of the insufficiency of Saussurean dyadic language

Postmodern architecture in general is an expression of uncertainty, plurality, and disjunction. This trend coins postmodern philosophy that seeks or defines the unachievable foundation of knowledge. Poststructuralism influenced on postmodern philosophy and eventually postmodern architecture. The variation of postmodern architecture is evidential in style and movement, but there is a common denomination behind their foundation of architectural theory. I determined this commonality belongs to *Saussurean postmodern architecture*, which shares the essential characteristics of architectural language, originated from *semiology, dyadic language theory*. This dyadic theory of architectural prevailed beyond the difference of style in postmodern architecture. Those architectural styles include postmodern historicism, postmodern eclecticism, postmodern classicism, deconstructivist style, and some of neo-rationalism architecture such as Aldo Rossi. Their theoretical underpinning of architectural language is associated with Saussure origin twofold relation, signifier-signified dichotomized relationship. Postmodern eclecticism, historicism, and classicism accepted this relation positively as their signification system with plurality of reference called multivalent, while deconstructivist style radicalized this relation without rejecting relationship itself under the signification system of 'deconstruction.' I call these two sectors of postmodern architecture '*scenographic architecture*.' Deconstructivist does not have reference for signifier. Instead, they seek the desire of proxy reference under the name of Derrida's version of logocentrism. *Metaphysical presence (signifier)* and *transcendental signified* does work as a proxy reference. Therefore, both postmodern historicism and deconstructivist style share the logic of twofold signification. Postmodern historicism holds this referential system for their method of expression as *positive scenographic architecture*, while deconstructivist use this system oppositely as *negative scenographic architecture*. Another sector of postmodern architecture is more contextual burden architecture such as critical regionalism architecture, phenomenology architecture, and neo-rationalism architecture. I defined this group as '*contextual architecture*.' They have an innate dyadic system called self-criticism. They are referencing at some level

internally. In that sense, they hold a kind of rationality and modernity. However, they are oscillating between universality and locality; they seek a tectonic universality and a cultural connection of locality and historical context; they appreciate vernacularism and the nearness to the materiality of tactile sensibility while rejecting authenticities such as of ethnicity seeking emancipation from them.

In postmodern architecture for both scenographic architecture and contextual architecture, the dyadic oscillation is a principle that is persisting in their mode of architectural creation. This creation is referenced to a language of architecture originated from Saussure language, which is dyadic. I question how *langue* and *parole* work together to create new entities of language to a new langue. In dyadic language it appears to have less explanation why this process is possible. Essentially *langue* and *parole* are distinctive in the system even if language works as a whole. This situation is similar in architectural language generation. The synchronic use of architectural language and the diachronic configuration toward a new invention of language has to be merged together through *parole*, architectural intention, and the creativity of language of architecture. I proposed triadic Peircean language system for coherent explanation beyond this limited dyadic view.

The influence of philosophy of language on dyadic architectural theory provided a limited view of architectural language in spite of its tight relationship between philosophy and architectural theory. The possible error was caused by a distorted understanding of Peircean triadic semeiotic sign theory, and the limited application of Peircean theory on language of architecture. The influence of structuralism addressed the dyadic language direction and this influence is continued by poststructuralism in the background—they are purely Saussurean origin, while in the foreground architectural theorist received the explicit guidance from Charles W Morris, Louis Hjelmslev, and Umberto Eco. Morris and Eco proclaimed the influence from Charles Sanders Peirce semeiotic for their development of sign theory. However, in the philosophy of language, the plausibility of their interpretation of Peirce's sign theory and its application has been

questioned by American pragmatism. John Dewey claimed Morris' sign theory was not that of Peircean philosophy. Although an essential disagreement between dyadic language and triadic language persists in the philosophy of language, the theorists of postmodern architecture were not aware of this problem. I proclaim this influence from philosophy of language onto architectural theory regarding architectural sign theory is inappropriate. Therefore, the finding of an alternative language theory is urgently necessary in order to explain a truer architectural language. The limitation of dyadic language theory of postmodern architecture must be aware.

The capability and the limitation to utilize a verbal language, semiology for the understanding of postmodern architecture originated from the scope in terms of ontological aspects. If we limit this scope we have limited the view of thinking based on the corresponding modes of being. Postmodern philosophy attempted to dispute the validity of knowledge through inquiry of grand narrative of knowledge authenticity. As Wittgenstein exemplified analytical language moved from positivist to more indeterminable pluralistic view, so as does in architecture. His *Tractatus* had shifted to *Philosophical Investigation*. Comparably, structuralism is replaced by post-structuralism; dimension of language is not static view of fixation. The fundamental innate problem is analogous of architectural language to verbal language, which comes with the long lasting principal problem regarding signification structure of language, that is, the difference between dyadic language and triadic language in the realm of philosophy of language. This problem is traditionally appeared not mitigated. Essentially the need of differentiation between dyadic and triadic is an unavoidable consideration. Also, the capability to approach the core of semantics of architecture is restricted for the application of Peircean logic and semeiotic at the time.

Benjamin and Adorno's influence on architectural language was due to the connection he made between sign and image, is confined, and because of the belief that language is mimesis that works as imitation function. Image of imitation can be partially valid as a dyadic unity in the local case. This dyadic unity by itself is a limitation to understand a

language of architecture in general and at the universal level for the triadic mode of language. However, this unity for him is separable with negativity, and possesses exchangeability. This dyadic relation of negative dialectics can be understood as a source of oscillation between universality of enlightenment and the locality of romanticism. This aestheticism triggers a shifting moment of two modes. The notion of ‘non-identity’⁹⁰⁷ is likely to be relevant to this shifting process and dynamic interpretant because of conflicting identity. Identity is an equivalency while non-identity opens other possibility because identity itself implies positive relation. Therefore, non-identity turns possibility to seek new identity to be equivalent, a desire to be satisfied. Adorno’s notion of non-identity relates to the notion of dehumanization can be taken as locally rather than universally—this is a particular case. There is a need to extend this locality to universality. Adorno lived with in-between identity and non-identity implies the swing situation of enlightenment and its reaction. Adorno’s dehumanization must be humanized with desired truth. This truth only can be attainable by the reflective process of dynamism. In architecture, the source of dehumanized feeling must be replaced or adjusted through an adaptation process because survival aesthetic experience generates this kind of aesthetic feeling. These juxtapositions of truth and non-truth provide the opportunity to be shifted. The question is how oscillation and shifting can be explained in an alternative language theory without relying on dyadic language.

(3) The architectural semantics and logic based on Peircean triadic sign theory

A dyadic language theory has a limitation to comprehend the reality of architectural language derived from triadic language source. Within Peircean *universal view of relativity*, to prove the capability of triadic mode of language, Peirce’s semeiotic role for a language theory of architecture, must have innate capabilities that include: (1) the appropriate consideration regarding the phenomenon of oscillation between universality and locality in order to articulate architectural language, (2) the determination of limitation of Saussurean dyadic mode of language and its relationship to Peircean triadic

⁹⁰⁷ Mautner, s.v. "Adorno".

semeiotic, and (3) the plausibility and sufficiency of Peircean semeiotic and logic for the multi-dimensional architectural semantics and architectural identity. The oscillation between universality and locality is prone to be a truth in a woven relation between philosophy and architecture. The need of architecture expressing reality has to be associated with the reality of philosophy. I described this general tendency that the language mode of architecture follows this inclination. Therefore, a language of architecture is in the middle of consideration regarding the phenomenon of this oscillation between rationalism and romanticism as such. Without proper comprehension of this reality, there can be no appropriate architectural language, even if to have a language of architecture is legitimated. The consideration in holistic view of language of architecture through Peircean semeiotic connects the monadic view that derived from Peircean “unitary logical vision.”⁹⁰⁸ The various phenomena of oscillation are unified with the vision of totality while this totality includes Peircean universal view of relativity that considers the shifting between universality and locality. The process of oscillation is associated with the notion of *dynamic interpretant* which creates the notion of semiosis. *Therefore, through Peirce the phenomena of oscillation and a language are synchronized with appropriate consideration of universality and locality.*

The explanation of a truth of architecture must be constructed on the specific truth of reality. The history of postmodern architectural language theory accepted dyadic Saussurean language theory that supposed to include triadic Peircean sign theory according to theorists of architecture in the 1970s. I described the essential difference of the dyadic language from those of Peircean triadic semeiotic. Charles Morris’ triadic system is not truthful; it is the collection of three distinctive dyadic relations. The followers of this sign theory must face urgent questions. Eco’s sign theory followed this Morris’ *semi-dyadic* sign theory. The dispute by John Dewey on Morris’ sign theory represents the doubt regarding a deviated view from the original Peircean philosophy. The theorists of architecture should be aware of this erroneous fact. Taking this fact as the reality of architectural language, the plausibility of dyadic Saussurean architectural

⁹⁰⁸ Burch, *Peirce's Reduction Thesis: The Foundation of Topological Logic*, 3.

language is disputable. *Peirce and Saussure both share the notion of “stand for” that creates the ‘relation of sign’ for Peirce while the ‘sign unit’ for Saussure. By recognizing commonality and difference between Peirce and Saussure, the rationale becomes that the triadic Peircean semeiotic should include the dyadic Saussurean semiology in it.* This result determines the limitation of dyadic view, and is just opposite from the view of the language theorists in architecture. Essentially, there is no doubt that Peircean secondness view, dyadic mode of being deals with the relations.

The architectural language is legitimated along with the needs of language as a new way of understanding the worldview after the experience in doubting of enlightenment. The suitability of architectural language theory model whether dyadic or triadic language needs to be determined. This inquiry guided me to reach the origin of possible architectural formal mode, Vitruvian *tripartition* system by comparing Peircean triadic semeiotic and logic. The fundamental theoretical underpinning stems from the analogy between formal tripartition and Peircean *interpretant* that is the central to triadic semeiotic theory that formulates Peircean universal system of relativity and triad. Peircean *interpretant* circulate triadic sign relations with relativity. This semiotic circulation is called semiosis. Essentially, Peirce defined the equivalency of *interpretant* as another sign, which is a thought, an idea. Therefore, this view creates *all things become sign and thoughts*. The system of tripartition is formal relations of three parts, while the logic of *tripartition* penetrates entire formal system of taxis, genera, and symmetry. Therefore, thought (*interpretant*) and logic (*tripartition*) must be linked in architectural language system. Thus, analogous analytical process between architectural formal system and Peircean semeiotic is established.

The characteristic of architectural language oscillation is the source of architectural creation in triadic mode of language. The creation of meaning is based on shifting and oscillation. For the *positive scenographic architecture*, it is directly mimesis and metaphorical reference. For the *negative scenographic architecture*, oscillation is a source of meaning creation that is supported by Peircean semeiotic and semantic logic.

In the dyadic mode of negative scenographic architecture, this oscillation is on and off or bipolar measurement, disjunctive proxy reference, and desire to unachievable fulfillment. This is suspended relations need a solution. Radically this aestheticizing method populated in poststructuralism rooted from Adorno's aesthetic and negative dialectics. But in the triadic mode, an oscillation is a process of changing. By changing, a meaning will be clarified and reach truth. The notion of *sign is stand for something else*, which are another *sign*, *interpretant* and *representamen*. In the core of triadic semeiotic the characteristic of oscillation and the notion of 'stand for' must be met coherently and logically. This condition is satisfied by the logical construction of Peircean Algebraic Logic (PAL). PAL specifies Peircean semantics that includes *depiction*, *representation*, and *expression* with two steps that allows establishing analogous architectural semantics, formal semantics and metaphysical semantics. The formal semantics deals with tripartition, and metaphysical semantics which is that of architectural meaning. This process recalls Peircean view of relativity and the triad system in which Peircean interpretant must be involved with the shifting mode of *interpretant* including *immediate interpretant*, *dynamic interpretant*, and *final interpretant* with Peircean universal view of relativity. Thus, architectural tripartition synchronizes with this mode shifting, and scale shifting within the hierarchy of architectural formal system.

The notion of architectural identity has been a critical element of architectural basic needs in theory. For critical regionalism architecture, identity defines the connection to site, ethics, and social meaning. Aestheticized *non-identity* is the reason to be *placeless*; simultaneously it has a possible connection to the triadic system of fulfillment. The need of architectural identity in triadic mode coins the condition of hypostatic abstraction (Peircean reduction) which requires certain combination of monadic identity, dyadic identity, and triadic identity (called specifically *teridentity* in Peircean algebraic logic). The theory of hypostatic abstraction formulates Peircean way of reduction that helps a meaning clarification hypostatically by replacing the combination of identities.

Architectural identity in the triadic mode has oscillation like survival aesthetic theory identified by Hildebrand and hedonic adaptation theory of hedonic psychology. I illustrated them as experiences of architectural oscillation that takes shifting mode of baselines in an aesthetic experience and at the point of hedonic stimuli. These experiences are understandable with triadic process by taking a model of architectural identities, which involve the shifting process of *interpretant*. The summarized architectural identities are: (1) *monadic architectural identity* can be explained as the reflective process of cognition and the orientation of ontological meaning of architecture. This architectural identity is theoretical identity with modernist view of metaphor. Monadic architectural identity is a mode of rationale. This identity is of logic, theory, and principle defining formal system of taxis. (2) *Dyadic architectural identity* is associated with materiality, methods, legitimacy in process such as formal vocabulary of genera. Dyadic architectural identity represents relation of oppositions (e.g. rational vs. romantic) and the solvable disjunctions through deeper interior experience. Dyadic architectural identity is a solution of conflict. (3) *Triadic architectural identity* is a cultural-form that is parallel to architectural space and architectural language between identities and the process of cultural exchange. Triadic architectural identity is a process of generalization through architectural language. Identity in truth, eternity, and final with transitory-ness (ending becomes beginning).

Shifting mode of interpretant provides the opportunity to introduce new entities of hypostatic abstraction in PAL. This new entities must be consist of certain combination of architectural identities including monadic, dyadic, and triadic. When this process involves Peircean *interpretant*, naturally we must consider Peircean universal view in thirdness. That can be also extended to the notion of thirdness involvement for hypostatic abstraction. Therefore, the model inducted from PAL can support a triadic architectural language. The case study applied to postmodern architecture interpretation with Peircean way demonstrates the plausibility of triadic model of architectural language as an alternative of dyadic Saussurean language architecture. The experience of oscillation is the origin of architectural creation in triadic way. The application of case

study is fruitful to evaluate postmodern architect beyond the difference of styles, cultural background, and the dynamism of oscillation of each project. Michael Graves' figurative architecture is of mode of scenographic establishing contextual mode within his architecture and tripartition is technically syntactical. Arata Isozaki's case study shows the transition from mannerist simulacra to contextual criticism. This transition is made with triadic oscillation in cultural difference from disjunctive architecture to the realization of cultural context. The complexity of architecture shown by Robert Venturi layered complexity and contradiction with mannerism as monadic identity. His technique as dyadic stimulator is interpreted by triadic format. His shifting mode such as *inflection* is coherently explainable by triadic way involving *tripartition* and *interpretant* that may express thirdness typically. Mario Botta's architectural philosophy, *Tendenza* is interpreted as monadic identity. The intention of his creative will is controversial. This conflict is the source of his creativity in secondness mode that further guides him to express in thirdness mode. This multiple-case study illustrated the capability of Peircean interpretation and sufficiency of logic to analyze postmodern architecture. *Therefore, Peircean interpretation provides the plausibility and sufficiency of Peircean semeiotic and logic for the multi-dimensional architectural semantics and architectural identity.*

(4) The role of Peircean semeiotic and its interpretation of Postmodern Architecture

Postmodern architecture is expressive on uncertainty and plurality along with postmodern philosophy's influence in terms of loss of grand narrative knowledge. The role of Peircean semeiotic for postmodern architecture is to provide the guidance to find the reason critically but not that of self-criticism. This is parallel to the role of pragmatism for postmodern philosophy that needs the intellectual technicality of support. Behind this proposition, Peircean universal view with *pragmatic maxim* is inevitable; and postmodern architecture can be articulated by Peirce more than Saussure applying triadic Peircean philosophy and sign theory.

Recalling hypothesis set in Chapter One:

- (1) *If architecture needs to be created under the appropriate consideration of universality and locality, the key knowledge of language of architecture must be adequately articulated.*
- (2) *The dyadic structure of language of architecture is not a truthful explanation of postmodern architecture.*
- (3) *The approach to a language of architecture via Charles Sanders Peirce's semeiotic theory will provide a truer method in order to define postmodern architecture.*

Responding to above critical needs this dissertation has been devoted. The essential system of language of architecture that facilitates the creation architecture and the communication through architecture was explained by analyzing the relationship between architecture and philosophy. The oscillation between rationalism and romanticism observed from postmodern architectural theory is fundamentally Saussurean base dichotomy that is systematized in a theory of language of postmodern architecture. The result of this school of thought produced the manner of picturesque and disjunction. This result is set in the postponed aestheticizing mannerism without guiding the fundamental aesthetic solution. The key knowledge of language was determined dyadic Saussurean semiology that renders the oscillation in the form of dyadic. This is secondness category in the case of Peircean triadic semeiotic, then the oscillation will be incorporated in the triad system.

Culturally embedded dyadic language theory dominated architectural language theory that creates illusions and conflict as it is. This is also postponed mannerism without specifying the critical process. It is patronizing or radicalizing form of architecture. It appears dead-end truth that we cannot escape because of the loss of grand narrative and in steads only local narrative can be a truth. At this point, the oscillation between universality and locality is terminated or postponed. Therefore, if we seek further truth, dyadic language has evident limitation and it is insufficient to explain essential 'truth.'

Peircean triadic language constitutes monadic, dyadic, and triadic relations in terms of entity relations and the mode of being. At a glance, the scope of theory is extended more than dyadic language theory. If we apply Peircean semeiotic as a truer method to define a theory of postmodern architecture, the meaning of metaphysic in postmodern architecture could be different in general understanding of postmodern architecture. These differences can be sketched out as the unification of the three including (1) postmodern historicism (monadic mode of expression), (2) deconstructivist (dyadic mode of conflict and disjunction), and (3) phenomenology architecture (triadic mode of contextual burden and monadic mode of existentialism). By applying Peircean interpretation these three postmodern movements could be unified to be constructed holistic architecture with *pragmatic maxim*.

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