

VANN, CHRISTOPHER SCOTT, M.F.A. A Reassessment of Enlightenment Architectural Thought in Thomas Jefferson's Poplar Forest: A Phenomenological Case Study. (2019)

Directed by Stoel Burrowes. 167 pp.

This case study examines the application of Continental and Neoclassical principals in the architecture of Thomas Jefferson with particular attention to Poplar Forest through an examination of the context of a skylight installed under Thomas Jefferson's direction. Jefferson's meaning has come to us in explicit form and is implicit in its very existence. Experientially light interpenetrates the absolute and mundane world of body, architecture and physicality. We may more easily experience this meaning than rationalize it; thus, the durable, tangible presence of the skylight transcends form or function, and fully expresses, as will be demonstrated here, Thomas Jefferson's intended meaning.

A REASSESSMENT OF ENLIGHTENMENT ARCHITECTURAL THOUGHT
IN THOMAS JEFFERSON'S POPLAR FOREST:
A PHENOMENOLOGICAL CASE STUDY

by

Christopher Scott Vann

A Thesis Submitted to
the Faculty of The Graduate School at
The University of North Carolina at Greensboro
in Partial Fulfillment
of the Requirements for the Degree
Master of Fine Arts

Greensboro
2019

Approved by

Committee Chair

APPROVAL PAGE

This thesis written by CHRISTOPHER SCOTT VANN has been approved by the following committee of the Faculty of The Graduate School at The University of North Carolina at Greensboro.

Committee Chair _____

Committee Members _____

Date of Acceptance by Committee

Date of Final Oral Examination

TABLE OF CONTENTS

	Page
LIST OF FIGURES	v
CHAPTER	
I. INTRODUCTION	1
Current Interpretation.....	8
Towards a Renewed Understanding.....	11
II. LITERATURE REVIEW	13
Sources	13
Approaches to the Study of Historic Documents	16
Alternative Paradigms	31
Gestalt	31
Material Culture: Orienting the Mind-Body Duality	33
Re-enlightenment: Immanence and Transcendence of Selfhood	36
The Nature of Order.....	40
Relevance.....	41
III. METHODOLOGY	45
What is Phenomenology?.....	48
The Methods of Phenomenology	49
Bracketing/Phenomenological Reduction.....	50
Explication	51
Identification/Significant Statements/Clusters of Meaning	53
Textural Description	53
Structural Description	54
Essential Invariant Structure	54
Conclusion	54
Aesthetic Study Precedents	56
Formulating a Research Design	56
Emic Investigation	59
Textural/Structural/Essence Interpretation.....	60
Explication: Phenomenological Interpretation.....	62
Structural Description	64

IV. EXPLICATION OF INTENTION	65
Part One: Philosophical Background	
[towards a Contextual Explication].....	68
Part Two: The Architectural Response to Enlightenment.....	72
Part Three: A Culture of Meaning	
[towards a Textural Explication].....	82
Notes on the Sublime: Beyond all Sensible Measure	100
He Had Seen Her Like a Beam of Light:	
A Culture of Light	106
Part Four: Between Earth & Sky: Jefferson’s Intentions in	
Architecture.....	116
V. OUTCOMES.....	129
What is the Role of Beauty?.....	133
Further Research	138
WORKS CITED	140
WORKS CONSULTED.....	147

LIST OF FIGURES

	Page
Figure 1. Architectural Rendering of Poplar Forest, View of the South Elevation	2
Figure 2. Poplar Forest Floorplan	6
Figure 3. Poplar Forest Section View Facing East	7
Figure 4. Monticello: 2 nd Version (West Elevation).....	21
Figure 5. Poplar Forest, Floorplan, Thomas Jefferson, circa 1814	22
Figure 6. Hôtel de Langeac, Garden Elevation.....	27
Figure 7. Hôtel de Langeac, Floorplan	28
Figure 8. Phenomenological Research Design.	55
Figure 9. Ariadne. Giovanni Battista Piranesi	77
Figure 10. Ruins Room of Padre Le Sueur.....	80
Figure 11. Travelers in the Interior of the Temple of Diana at Baia	81
Figure 12. Interior; Piranesi, Piranesi in Rome.....	81
Figure 13. Ruined Vault, Hubert Robert, 1785.....	83
Figure 14. Lever du Soleil sur le char de l’Aurore, circa 1770	87
Figure 15. Domed Roof of the Halle Aux Blés, Nicolas Le Camus De Mézières, circa 1767.....	88
Figure 16. Theorem for Drawing Three Sides of an Octagon on a Given Base, with Diagram, Thomas Jefferson, circa 1771.....	92
Figure 17. The Primitive Hut.	96
Figure 18. L’hôtel de Brunoy	102
Figure 19. Pavillon de Musique de Madame à Versailles	104

Figure 20. Pantheon, Rome, Hiroshi Sugimoto, 2015.	109
Figure 21. Ecstasy of Saint Teresa, 1647-1652.	111
Figure 22. Detail View, Ecstasy of Saint Teresa, 1647-1650.....	113
Figure 23. L’Abri du Pauvre (Shelter of the Poor)	115
Figure 24. Poplar Forest, View Looking East in Central Dining Room.....	121
Figure 25. Poplar Forest, View Looking South in Parlor	122
Figure 26. Poplar Forest, Dining Room Facing North.....	123
Figure 27. Poplar Forest, Skylight.	124
Figure 28. Poplar Forest, Facing South in Entrance Hallway.....	125
Figure 29. South Front of Poplar Forest	126
Figure 30. Poplar Forest, View From the Roof Terrace Facing South.....	127
Figure 31. Poplar Forest, Sky	128

CHAPTER I
INTRODUCTION

What speaks to the soul, escapes our measurements.
—*Alexander von Humboldt*

The house and gardens at Poplar Forest were designed by and built under the direction of Thomas Jefferson for personal use as a retreat from pressing public demands.¹ Jefferson states, in a letter to his son-in-law, that Poplar Forest will be: "the best dwelling house in the state, except that of Monticello; perhaps preferable to that, as more proportioned to the faculties² of a private citizen." (Jefferson, 1812)³ Poplar Forest represents the idealized environment which Jefferson envisioned for a citizen of the most radical of all Enlightenment experiments, that of creating a self-determined government

¹ For example: "The crowd at Monticello of friends and strangers, of stationary or ever-varying guests, the coming and going, the incessant calls upon his own time and attention, the want of leisure that such a state of things entailed as a necessary consequence, the bustle and hurry of an almost perpetual round of company, wearied and harassed him in the end, whatever pleasure he may have taken, and it was sometimes great, in the society and conversation of his guests. At Poplar Forest he found in a pleasant home, rest, leisure, power to carry on his favorite pursuits—to think, to study, to read—whilst the presence of part of his family took away all character of solitude from his retreat." (Ellen Wayles Randolph, 1856. As quoted in Chambers, 1998, p. 211)

² Carl Jung writes of the *facultas praeformandi* that pre-form an archetype with the "possibility of representation." Nevertheless, these potentials "continually influence our thoughts and feelings and emotions." The faculty itself is "a primordial image ... determined as to its contents only when it has become conscious and is therefore filled out with the material of conscious experience." Forms, in other words, takes on meaning once we have experienced their "living dispositions." (p. 79. Jung, 1969).

³ Jefferson to John Wayles Eppes, 1812, in PTJ:RS, 5:348-49

which served to liberate the human spirit “... the result of our experiment will be, that men are capable of governing themselves without a master.” (Jefferson, 1787)⁴

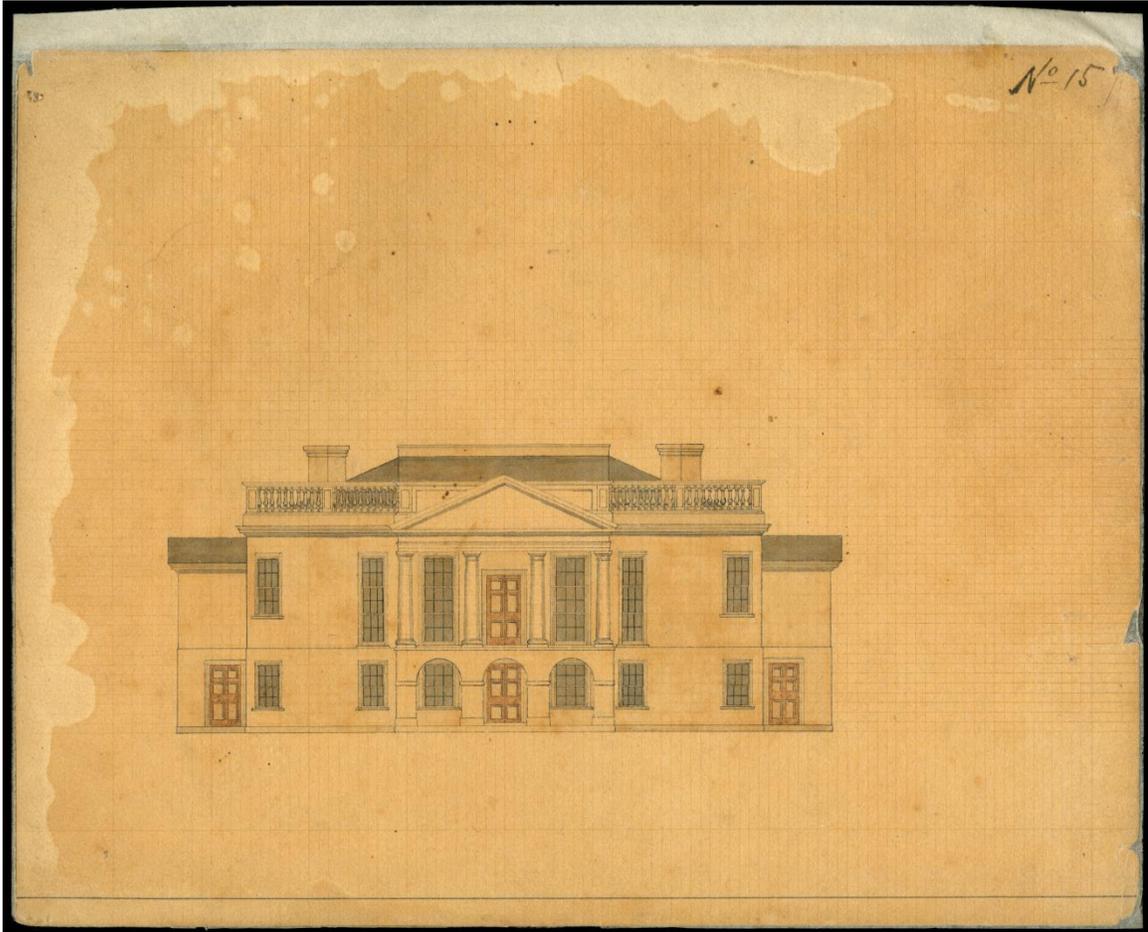


Figure 1. Architectural Rendering of Poplar Forest, View of the South Elevation. Attributed to John Neilson, Circa 1819. Jefferson tells us that Neilson: “a house Joiner by trade worked for me at Monticello some years. I can assure those who may have occasion to employ him that he is perfectly acquainted with the orders of Architecture, and the most approved stile of finishing both inside and outside work, is equal in the execution of it to any workman in America, draws well and is a complete master of his business in all its parts. he is moreover perfectly honest sober & correct in his department (Jefferson, 1812)”. Special Collections University of Virginia Library.

⁴ Thomas Jefferson to T. B. Hollis. Paris, 1787. ME 6:156

Construction on Poplar Forest began in 1805, within weeks of Jefferson's inauguration to his second term as President of the United States and following his victory in electoral revolution of 1800 which firmly established Republican values.⁵ Work on the house, and improvements to the property continued up to the time of Jefferson's death in 1826.⁶ The house was privately owned until purchased by the Corporation for Thomas Jefferson's Poplar Forest in 1984; two hundred years from the time Jefferson arrived in France as the American Minister.

The house at Poplar Forest (Figure 1) combines elements of Roman architecture including tetrastyle Tuscan porticos to the north and south (*amphiprostyle*). The continuous Tuscan cornice is expressed around the entire octagon-shaped house and is surmounted by a balustrade which terminate as pedestals at the gable end of each portico. The north façade gives the appearance of being a single story over a raised basement. The attic story is concealed behind the balustrade. A belvedere surrounded by a Chinese inspired railing expresses the interior volume at the core of Jefferson's spatial composition (the Neilson drawing includes neither cornice, nor belvedere railing). The east and west elevations boast stair pavilions, with the east pavilion opening onto a terrace. The terrace deck, which Jefferson used as a promenade, shelters a wing of service rooms built on grade below. The portico on the south elevation is raised above a base of roman arches overlooking a sunken lawn. The interior of the house is symmetrically

⁵ The "revolution of 1800 was as real a revolution in the principles of our government as that of '76 was in its form; not effected indeed by the sword, as that, but by the rational and peaceable instrument of reform, the suffrage of the people" (Jefferson, 1819). For further information on the "Revolution of 1800" see: https://www.monticello.org/site/research-and-collections/election-1800#_note-0

⁶ John Hemings and his apprentices were working on repairs to the terrace roof later in 1825 (TJ to John Hemings, August 17, 1825).

arranged, with a suite of rooms to the east and west, mirrored on either side of a central axis comprised of three public rooms running north to south (Figure 2). The axis is hierarchical in accordance with Classical principles and ranges from Tuscan on the exterior and within the entrance corridor, to a Doric Dining Room, and Ionic parlor from which point the order returns to Tuscan on the adjoining portico to the south.

Jefferson's granddaughter Ellen Wayles Randolph describes the house: "It was an exact octagon, with a centre-hall twenty feet square, lighted from above. This was a beautiful room and served as a dining room" (Ellen Wayles Randolph, 1856. As quoted in Chambers, 1998, p. 211). By the time of Ellen's written description, Poplar Forest was under the ownership of the Hutter family and had suffered a devastating fire which all but destroyed the material results of Jefferson's construction. Ellen is therefore describing her memory of Poplar Forest such as it was when her grandfather was in residence. It is notable that Ellen qualifies the beauty of the space before describing the functional use of the space. Ellen's description contains a set of values, a language beyond form: "...lighted from above. This was a beautiful room"—an offer something meaningful of the experience of Poplar Forest.

However, based on a current twentieth century functionalist critique, the core volume described by Ellen Wayles Randolph of Jefferson's retreat house—the "centre-hall twenty feet square, lighted from above" is "inconvenient." Somehow the functionalist lens used in a mechanistic approach to history veils the significance of beauty. The twenty-first century body of knowledge which forms the lens through which

we interpret Poplar Forest, or as experienced by Jefferson's granddaughter, obscures the experience of Jefferson's intention.

A purely pragmatic Jefferson would have avoided the problematic skylight altogether. It leaked incessantly, individual panes of glass (which were shattered in a hail storm in the summer of 1819)⁷ had to be dispatched from afar, they could not be reliably cut on site, the quantity ordered was nearly doubled to accommodate breakage during transport—So grievous were the problems associated with this novel feature of American architecture, that subsequent owners choose not to replace it after the fire, and thus eliminated it all together. There is a suspicion that Jefferson is not the pragmatic architect that twentieth century critics would have us believe. Why did Jefferson install a skylight? Ellen Wayles Randolph's comment on the beauty of the space makes us wonder.

⁷ See Chapter XVI "Greatest Hail Storm Ever Saw" (Summer 1819) in *Poplar Forest & Thomas Jefferson* by S. Allen Chambers, 1993 for a more complete reporting of the problems related to the skylight.

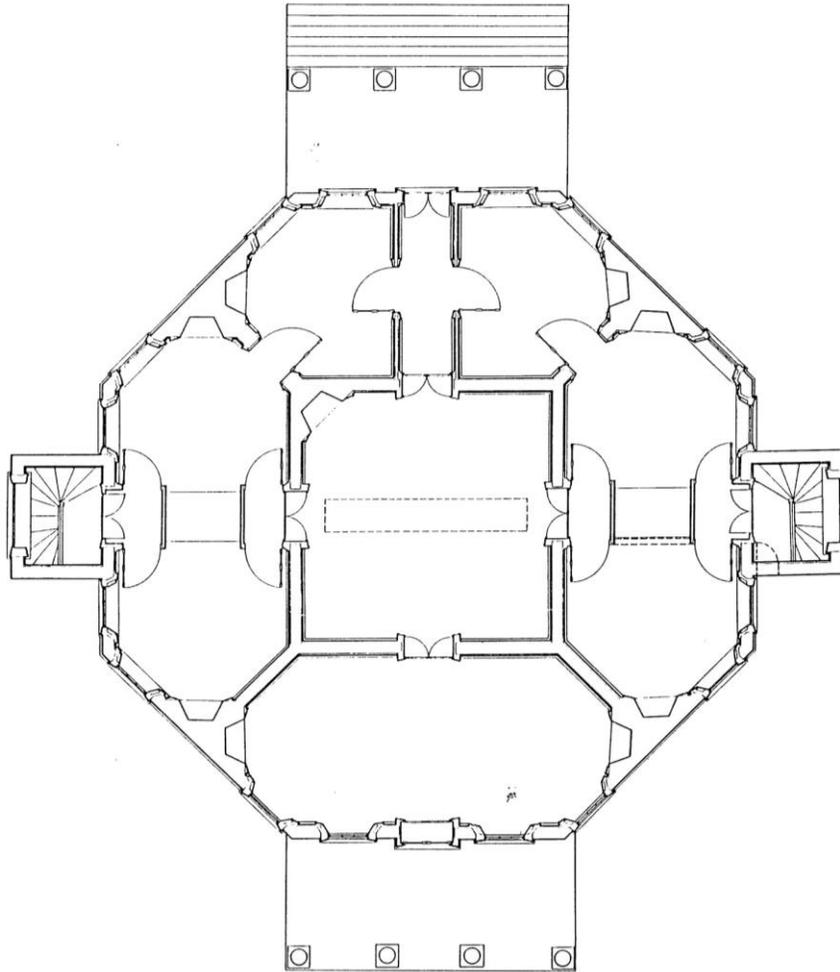


Figure 2. Poplar Forest Floorplan. In plan the central axis of public rooms runs from north to south. The surrounding suites of private rooms are laid symmetrically along the central axis. The plan further represents the overhead skylight, oriented east/west in the central cubic dining room. Reproduced with permission from Mesick Cohen Wilson Baker Architects and The Corporation for Thomas Jefferson's Poplar Forest.



Figure 3. Poplar Forest Section View Facing East. Jefferson's skylight is prominently located at the core of the house's composition. Reproduced with permission from Mesick Cohen Wilson Baker Architects and The Corporation for Thomas Jefferson's Poplar Forest.

Jefferson did not leave a written depiction of his architectural thinking to guide us through his aspirations with Poplar Forest. However, the meticulous records Jefferson kept provide a rich source of archival information; together with the concrete evidence of the reconstructed environment itself we have the beginnings of a structure upon which to form an understanding of what Jefferson's thinking may have been. Certainly, Jefferson appears less influenced by the need to convey a public character of Poplar Forest than by a need for imagining what Christopher Alexander, in *The Luminous Ground* (2004), refers to as "the movement of the self towards its origin"—The essential function of a retreat. Poplar Forest seems to speak of an internal world, a world formed by Jefferson's experience of architecture, and in turn the expression of his personal experiences in architectural form. This sentiment is not without its echo in the literature, philosophy, and indeed in the architecture, of Jefferson's time.

Fortunately for researchers, Jefferson relied on a lifetime of studying, reading, imaging and building architecture. His reliance on books is very well established. That Jefferson also experienced architectural aesthetics is lacking in available critique, while Jefferson's experience with the radical architectural transformations of the last quarter of the eighteenth century, the source of Jefferson's architectural intentions is severely undervalued in the scholarship of Jefferson's architectural praxis.

Current Interpretation

The Corporation for Thomas Jefferson's Poplar Forest was formed as a nonprofit foundation in 1984 to protect and restore Jefferson's retreat house on Poplar Forest Plantation eighty miles south of Monticello. The Corporation's mission is to protect, restore and preserve Jefferson's legacy. The property hosts an ongoing research program into the cultural significance of Thomas Jefferson's Poplar Forest through the Corporation's efforts in restoration, archeology, material history, social history, and interpretation.

It has been one of the most investigated, documented, and analyzed historic house sites of this century ... Since 1989 the staff has included archaeologists, architectural historians, historians, interpreters, architectural conservators, and craftsmen in addition to administrative staff. All of whom contributed to a wealth of information concerning the constructions, social history and historic significance of this unique house site (MCDONALD, 1996).

A reconstruction of the house to its period of significance is supported by intensive archeological research of extant physical traces validated by archival research. The program of reconstruction follows the sequence of the original construction

documented in Jefferson's letters of instruction to his workmen, many written while Jefferson was still serving as President.⁸

While the thoroughness and relative completeness of the reconstruction of Poplar Forest provides a window into Jefferson's possible architectural intentions—our understanding of the historic significance of Jefferson's aesthetic choice is limited by the methods applied to architectural research. Reconstruction efforts of The Corporation for Thomas Jefferson's Poplar Forest have provided the context for a renewed spatial, technical, and material experience of the property for a contemporary audience. While the need for verifiable evidence promises an accurate historic understanding, the reliance on materialistic theories upon which reconstruction must be based raises profound challenges to the qualities of mind concretized in its form. Subsequently, our understanding of the significance and ability of Jefferson's architectural imagination concerning aesthetic choice is restricted.⁹ The paradigm in which Jeffersonian architecture has been critiqued, as authentic as the resulting physical representation may be, limit our understanding of the foundations of Jefferson's architectural output. As Richard Guy Wilson, architectural historian and the current Commonwealth Professor in Architectural History at the University of Virginia, states in *Jefferson and Palladio: Constructing a New World*: "The question of what meanings were implied by Jefferson in the selection of ancient sources must be approached with care."

⁸ For further information concerning reconstruction as a treatment of historic properties see: <https://www.nps.gov/tps/standards/four-treatments/treatment-reconstruction.htm>

⁹ "... comment donc se persuader que l'esprit et la matière ne sont pas deux substances différentes?" (Suzanne Necker, 1798) Translated as: "...How then to persuade one's self that the soul and the body are not two different substances."

A public recognition of Thomas Jefferson's contribution to architectural thought emerged in 1915, with the publication of *Thomas Jefferson: Architect* by Harvard graduate Fiske Kimball.¹⁰ American architectural history grew out of the field of art history at Harvard from the 1890's. With its emphasis on historicism and factual knowledge, largely based on trends contemporaneous with Kimball's writing (Langlois, Seignobos, & Berry, 2009), the mechanics of architectural history have come to describe the material and technological evolution of our built environment while neglecting the conceptual foundations essential to architectural design practice. Kimball was instrumental in establishing the mechanical and material significance of historic sites embedded in the practice of historic preservation standards followed in the United States since the first half of the twentieth century.

Aesthetic meaning fell into disfavor in the early twentieth century. The onset of mechanical utility (function) produced a seismic wave through the existing schools of architecture—shifting the application of architectural theory to an emphasis on form as determined by functional requirements. Today, the conceptual, aesthetic values foundational to architectural design, particularly classical design, have been neglected to such a degree that “the cultural meaning embodied in historic architecture is regrettably devalued” (Lang, 1987). The mechanistic perspective has relegated an operable

¹⁰ As the historic preservation movement in the United States takes on its own historic significance the promise of future writings about Kimball's contribution is emanate. At the present moment an overview of Kimball's career is available in “Fiske Kimball's National Park Service Memoir” by John H. Sprinkle Jr. for *CRM: The Journal for Heritage Stewardship* and the insightful “The Writings of Fiske Kimball: A Synthesis of Architectural History and Practice” by Lauren Weiss Bricker in *The Architectural historian in America: a symposium in celebration of the fiftieth anniversary of the founding of the Society of Architectural Historians*.

knowledge of classical theory concerning aesthetics to a historical context, resulting in the fracture of a previously holistic system, further limiting design praxis of classical, or neoclassical theory, to one of historical style.

Simultaneously, an inadequate understanding of the role of beauty distanced the emergent field of architectural history from an understanding of the vital role aesthetic sensation contributes to our experience of the built environment. In essence, as designers, builders and historians, we have systematically neglected the expressive qualities of beauty in architecture. Contemporary mechanistic theories are largely silent on the subjective experience and language of space, leading to an ignorance of the role played by spatial experience, memory, and imagination in forming aesthetic sensation.

(Alexander, Ishikawa, & Silverstein, 1977).

Towards a Renewed Understanding

Why did Jefferson install a skylight? Jefferson's participation in forming a radical, new experiment of government wherein "the will of everyone has a just influence" is reliant on a self-acknowledged will. The skylight in Poplar Forest, in this context, is compelling evidence for the objective reality of self, in its natural habitat as it participates in establishing an existential foothold within a new form of social construct.

The history of the built environment is a record of human aspiration. While philosophy contemplates the emergence of human consciousness from the natural order; architecture is the emergence of consciousness into material form. The process of embodiment, the giving of form to thought, generates an isomorphic correspondence of idea and object as inseparable forms. This study attempts to liberate our understanding of

Jeffersonian architecture from the distribution of parts in the mechanistic methods of twentieth century criticism in order to reestablish an understanding of the source from which Poplar Forest emerged.

CHAPTER II
LITERATURE REVIEW

I cannot live without books.
– *Thomas Jefferson*

Jefferson’s legacy is well established; We have his designed landscapes and buildings, a rich record of social commentary, attitudes, building techniques; as well as an extensive architectural bibliography. The body of scholarship on Jefferson, and of Jeffersonian architecture and architectural achievement is broad and deep. The existing scholarship recognizes Jefferson’s significant contributions to the development of American architecture; from Fiske Kimball’s initial investigations¹¹ to the more recent archeological and architectural histories of Jefferson’s life, his accomplishments offer us an excellent subject around which to form a historical case study into the nature of mind, meaning and the built environment.

Sources

This study has taken place over the course of a three-year academic program in Interior Architecture; a concentrated period during which the researcher required the identification of a theoretical framework and a broad knowledge of the intellectual culture in which Jefferson operated. Parallel to developing a working knowledge of

¹¹ *Thomas Jefferson: Architect* was published in 1915 in a limited edition of 500. A second edition did not appear until 1962 with a new foreword, which concedes: “Jefferson had studied the recent architectural innovations in form and structure, including Ledoux’s grandiose toll gates, and Molinos and Legrand’s *Halle aux Blé*.”

Jefferson's cultural context, is the need to overcome the accretions of bias layered upon our own time. Truth, in the academic sense, requires the objective application of relevant information through a known framework and methodology which inevitably skew our view of history in some fashion or other.

In an effort to offer posterity a truthful testament to his life, Jefferson saved annotated copies of correspondence, journals, & notes:

... approximately 70,000 items gathered from 900 repositories and private collections worldwide. Neither an archive of original manuscript materials nor a collection of digital facsimile images, the Jefferson Papers is a collaborative publishing hub providing in print—and now in electronic format—quality, contextualized Jefferson source material for posterity.¹²

The knowledge which this investigation seeks is supplemental to over one hundred years of archival, contextual research beginning with historian Fiske Kimball in 1915 through the archival/archeological/architectural history of structural, technical, and material aspects of Poplar Forest. A similar task continues unabated to the present day at The Corporation for Thomas Jefferson's Poplar Forest and beyond. Publication of the findings from these cumulative efforts is ongoing, and awe inspiring.

Much of the research to authenticate historic materials is archival, and without the efforts of those who document, record and organize for example, Jefferson's instructions in the construction of Poplar Forest, the accomplishments of a reconstruction team are

¹² <https://jeffersonpapers.princeton.edu/>

hindered.¹³ S. Allen Chambers “researched all known Jefferson sources for several years before writing the award-winning definitive history *Poplar Forest and Thomas Jefferson*.” (“In-Depth Research on a Thomas Jefferson Historical Site,” n.d.) The emphasis on known Jefferson sources, or verifiable material sources is important to establishing authenticity, and it has been so since the inception of American architectural history as a field of study. The craftsmen, under Travis McDonald’s direction, are readily acknowledged as the individuals responsible for raising Poplar Forest from the ashes of a devastating fire which occurred in 1845 (Poplar Forest Preservation Field School Summer, 2018). However, as yet, there is no publication which offers a comprehensive view of the reconstruction of Poplar Forest.

Apart from Jeffersonian scholarship, the phenomenological literature on architecture is limited; on historic architecture it is even more restrained, and on the subject of historic architectural components, such as glass, or windows, it is virtually nonexistent. The scope of this case study is severely limited when laid against Jefferson scholarship. However, to follow our own example, as an effort to understand why windows, or sky lighting, exist in relation to their structural properties, the current research is a small beginning to that end.

¹³ For a thorough survey of archival research on Poplar Forest see: *Poplar Forest and Thomas Jefferson* (1998) by S. Allen Chambers, Jr.

Approaches to the Study of Historic Documents

The approach to the study of history in the opening decades of the twentieth century is a method outlined by French historian Charles-Victor Langlois' *Introduction to the Study of History*. Langlois was the Director of the French National Archives at the time Fiske Kimball¹⁴ was preparing *Thomas Jefferson: Architect*. An English language translation of Langlois' text was published in 1903. Langlois refuted the notion of history taught by precept,¹⁵ and, through his role as professor and author, promoted an approach based on scientific principles. Langlois advocates for establishing an analysis of source documents before embarking on a synthesis of available sources into historical account. ("Seeing History | Langlois et Seignobos," n.d.)

Historian Fiske Kimball's (1888-1955) work was aided in collaboration with Mrs. Kimball, with whom he shared research discoveries over the course of Kimball's significant career. The Kimballs' accomplishments as (architectural) historians was supported by a virtual army of researchers. Experts, craftspeople, academics, administrators, patrons, and publishers participated in a culture with the resources and determination to understand the significance of Jefferson's architectural, philosophical and political contribution in forming the American identity. It is with great humility that one approaches such a degree of rigor as that which sustains over a century of

¹⁴ Kimball would ultimately serve on three museum boards, as faculty at the University of Virginia, as Director of the project to restore Monticello, as museum curator, and as Author. Kimball contributed to the establishment of the guidelines which became the National Park Service's standards of preservation, offered restoration expertise for Jamestown and Colonial Williamsburg, advised on the HABS project, and critiqued academic research, preservation policy, and architectural practice. His methodology concerning architectural history, particularly American architectural history is influential.

¹⁵ Essentially refuting the interpretation of doctrine as a valid form of argument.

accomplishment and which continues to reveal not only Jefferson's personal history, but the origins of the present day.

Langlois' protocol is echoed in Kimball's collaborative *A History of Architecture*, and precisely maps the method applied by Kimball in *Thomas Jefferson: Architect*.

Authenticity in Langlois' framework is essential: "If an alleged event has occurred, there would be some document in existence in which it would be referred to" (Langlois et al., 2009). Authenticity is a powerful tool when applied to the historian's pen. Armed with the clear provenance of the Coolidge papers¹⁶ and tangible evidence, Kimball refutes the scholarship of his contemporaries which had previously denied Jefferson's authorship of Monticello, the University of Virginia—while Poplar Forest languished in obscurity.

From a materialist perspective, Kimball had discovered the point of origin of American architecture in the form of Thomas Jefferson's achievements. However, the publication of Kimball's findings reveals much more about his own time than of Jefferson's. At the period of Jefferson's life in Europe, French architectural practice valued the aesthetics of sensation as reflected in both the philosophy and the architectural culture of the period. Jefferson, as we shall see, was an active participant in this culture, a culture which gave form to an emotional, sensory language.

Contemporaneous with Langlois' work in France, the discipline of architectural history in the United States grew out of the program of art history at Harvard University in the early twentieth century. Fiske Kimball's private publication of *Thomas Jefferson: Architect*, reintroduced Jefferson as architect, primarily among scholars, for whom

¹⁶ With reference to the papers contained in The Coolidge Collection of Thomas Jefferson's Manuscripts at the Massachusetts Historical Society.

Kimball's research was intended. Jefferson's architectural career was re-discovered, and Kimball's career as historian was established. Kimball next contributed to the publication of the ambitious *A History of Architecture*, in collaboration with George Harold Edgell, a Harvard peer. For these pioneers of materialist American architectural history, history was the evolutionary process of style, in which styles emerges, flourishes, and degenerates. Guided by the presence of craftsmanship, of precedent, and the occasional British pattern book, the doctrine of American architecture continued to evolve.

The methodology which Kimball had tentatively applied to *Thomas Jefferson: Architect*, was fully developed in Kimball's collaboration with Edgell in the 1918 publication of *A History of Architecture*. A preface to *A History of Architecture*, provided by Dr. George H. Chase; acting as Professor of Archaeology at Harvard (Arthistorians.info, 2018) states:

The office of the historian is to trace development, to show how the art of any period grew out of that of earlier times and in turn conditioned that of later days. Too many of the older histories were written to uphold a particular system of aesthetics ... expressions of purely personal judgement and theories which have generally accepted should be eliminated so far as possible ... it is recognized that in the history of art, as in other branches of history, subjective criticism must give way to the impartial study of development—in which historical influence is the criterion of importance. (Kimball & Edgell, 1918)

In Kimball's hands, the implications of such a definitive "criterion" proved grave to the philosophical aspirations of Enlightenment architecture, including Jefferson's.¹⁷ In an apparent effort to dispel accusations of scientific bias on the part of the authors of *A History of Architecture*, Chase offers this:

The part of spiritual influences and spontaneous creation in the form of styles is now emphasized, to balance one-sided affirmations, by nineteenth-century writers, of the influence of material environment.

While not specifically directed at a particular style, or architect, or Jefferson even, Chase acknowledges that spiritual belief, including an adherence to spontaneous creation (however opposed to impartial study such beliefs may be) is a substantive influence on the development of style (note the substitution of style for material environment). Otherwise stated, Chase is deflecting accusations that the deterministic approach to historic research is in any way a theory of evolution, while maintaining the position that style is an evolutionary process. The balancing of "one-sided affirmations" and spiritual values in American architecture is not unique to early twentieth century academic

¹⁷ George Santayana wrote *The Sense of Beauty* (1896), to attain tenure at Harvard during this period. Santayana contends that a sense of beauty emerges from a predetermined, evolutionary basis, arguing, for example, that symmetry is a pleasing perceptual experience. Santayana later rejected the views expressed during his Harvard tenure. By contrast, symmetry is now believed to be a fundamental component, or inherent feature of reality, although the philosophy of science still contends with such concepts as subjective observations arising from our own history of thought; in other words, symmetry is not a fact, merely a description of perceived patterns (Lanza & Berman, 2010). For an architect's perspective on quantum symmetry see for example: Alexander, Christopher (2004) *The Luminous Ground: An Essay on the Art of Building and the Nature of the Universe*.

debate¹⁸, nor even to the present moment into which it continues unabated. Architectural theory is formed precisely from the historic tensions arising from a demand on our architecture to continually transcend its limitations.¹⁹

¹⁸ Kimball on Jefferson: “In France as elsewhere, personal relationships were less influential in Jefferson’s development than observation and the study of books, but there, for the only time in his life, he did have the society of persons richly experienced in connoisseurship, with whom the exchange of views must have been powerfully stimulating. “ (Kimball, 1916, 1968, p. 39) The statement contradicts itself, perhaps as Kimball’s one-sided affirmation that Jefferson, contrary to the history of Kimball’s time, must have spontaneously generated himself from the pages of Palladio.

¹⁹ In the decade which precedes the publication of Darwin’s *The Origin of Species*, Horatio Greenough (1805-1852) writes in 1843:

The fundamental of building found as the basis of every style of architecture must be the basis of ours. The adaptation of the forms and magnitude of structures to the climate they are exposed to, and the offices for which they are intended, and the institutions from which they sprang.

In spite of the title of Greenough’s essay, *Form and Function*, Greenough is not a functionalist in the modern sense, rather he is operating from the perspective of the Romantic era and its horror of the violence caused by the unquenchable idealism of the neo-classical *philosophes* of Jefferson’s generation. Greenough states: “Reason can dissect, but cannot originate, she can adopt, but cannot create ...” Greenough’s prosaic essay advocates (in the voice of an earlier generation of Harvard graduates) for the inherent forms of nature which create the sinuous lines of a wooden ship moving through the sea. Although Greenough is himself a classicist, keen on depicting the heroic struggle of the American Founding Fathers with naked musculature, Jefferson’s aspirations towards idealism are, to Greenough, elusive:

We have before us a letter in which Mr. Jefferson recommends the model of the *Maison Carrée* for the State House at Richmond. Was he aware that the *Maison Carrée* is but a fragment, and that, too of a Roman temple? He was; it is beautiful-is the answer.

Greenough’s invective originates in the artist’s need to generate forms which express the American experiment in the face of concerns, the struggles even, unique to America. Among Greenough’s perceived concerns is the heroic effort required in inhabiting, indeed of expanding into a vast wilderness. European historicism, in Greenough’s view, is meaningless in the American context. But Greenough’s aesthetic need was not Jefferson’s; and were it not for Jefferson’s search for modes of reasoning tested by the duration of European thought to serve in sustaining the American experiment, Greenough’s plea would be in vain.



Figure 4. Monticello: 2nd Version (West Elevation). Recto, by Robert Mills, circa 1803. At the time of publication of *Thomas Jefferson: Architect*, this drawing by Robert Mills led historians to conclude that Mills had designed Monticello. Mills was, in fact, an architectural protégé of Jefferson. Mills is believed to be the first professional trained in the United States.

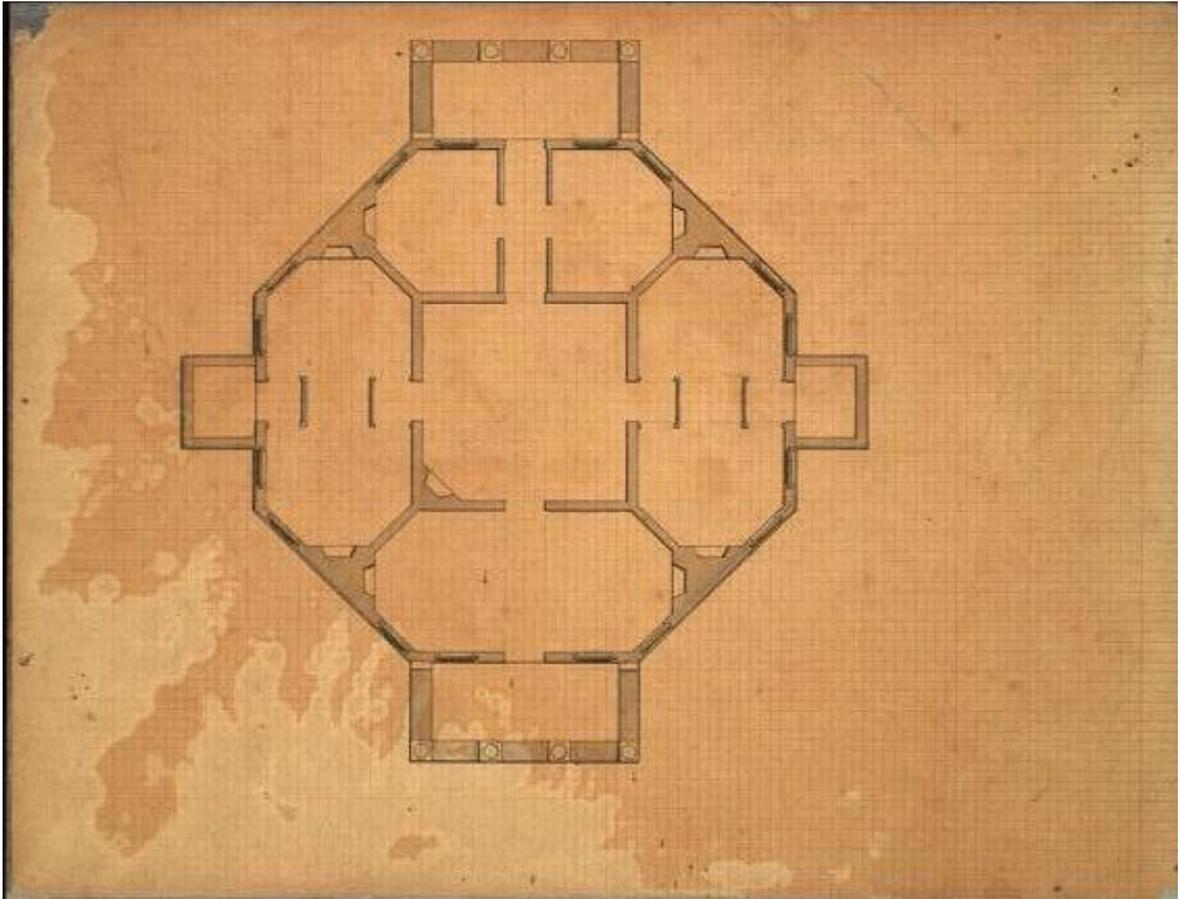


Figure 5. Poplar Forest, Floorplan, Thomas Jefferson, circa 1814. The plan is drawn on coordinate paper obtained by Jefferson during his tenure as Ambassador to France.

Clarified further by the disregard of historic context and supported by the scientific advances of Harvard, Kimball was eager to publish his conclusions regarding the architectural autonomy of Thomas Jefferson. With meager means, and with a rush to publish, Kimball failed to visit the sites under investigation during the period of research (Howard, 2006) (Sprinkle Jr., n.d.). Even at the point of publication, Kimball had never visited the South to experience firsthand the functional, structural, and spatial systems

which had generated a working plantation.²⁰ However, Kimball seeks out photographic evidence of Poplar Forest²¹ to verify the authenticity of the house's historic fabric; with his brief description, based on photographic evidence, and a mention of a "top lit dining room" gleaned from the archive at his disposal, Kimball concludes that Poplar Forest is visually beyond recognition, and further study of the house was abandoned.

Kimball's analysis of the notes and drawings included in The Coolidge Collection, proved that it was indeed Jefferson who had designed and instructed the construction of public monuments as well as a number of house designs. In order to do so, Kimball, presumably following Langlois' methodology, established a chronology of the archival materials to which he had access, thereby establishing a timeline of Jefferson's architectural education. Kimball, however, infers that Jefferson's education in architecture was complete by the time Jefferson arrives in Paris in 1784. Although Langlois' writing warns against such inferences, Kimball draws a number of conclusions of a questionable nature, stating that the refined architectural achievements of Paris must have held for Jefferson, "an affinity with his own ideas" (Kimball, 1915, 1968). The social function of architecture notwithstanding, Kimball's insistence of Jefferson as an autonomous, independent agent of architecture defies the predominate sensualist aesthetic theory of eighteenth-century French author Charles Batteux:

²⁰ An area of study whose importance has finally emerged in the twenty-first century and is still far from being fully understood.

²¹ The historian's need to supplant his physical presence with photographic evidence, combined with the make-work programs of the Great Depression culminates in the Historic American Buildings Survey (HABS). Kimball's reliance on photographic technology as a means of data collection places him at the forefront of mediology, the study of technology as a means of communicating cultural knowledge. Similarly, an investigation of Jefferson's reliance on books is an endeavor in mediology. For further discussion of mediology, See Régis Debray's *Transmitting Culture*, 2007.

Il n'est pas possible que les yeux les plus grossiers, voyant chaque jour les chefs-d'œuvres de la sculpture et de la peinture, ayant devant eux des édifices superbes & réguliers ; que les génies les moins disposés à la vertu & aux graces, à force de lire des ouvrages pensés noblement, et délicatement exprimés, ne prennent une certaine habitude de l'ordre, de la noblesse, de la délicatesse.²²

It is not possible, even for the most brut of eyes, in seeing each day masterful works of sculpture and painting, having before them the most beautiful, harmonious edifices; or that the soul the lest disposed to virtue and grace, confronted with the most noble works of thought, delicately expressed, could not take a certain habit of order, of nobility, and of delicacy (Batteux, 1746).

Although successful at establishing Jefferson's legacy, Kimball's semantics, and failure of resources, limit our understanding of the autodidact architect Jefferson's capacity to experience and act upon the environment borne of French architectural theory and philosophy. The early twentieth century history proffered by Kimball denies access to the development of Jefferson's architectural imagination. That Jefferson partially demolished Monticello²³ in order to rebuild, according to the modern principles he had experienced in France, suffices to make Kimball's conclusion in this regard incomplete in its attempt to prove Jefferson's architectural autonomy to the subsequent twentieth century reader. Furthermore, writing in 1816, George Flower, a guest at Poplar Forest writes:

²² The Author is translating from Charles Batteux, *Les beaux-arts reduits a une meme principe*. Partie 2. Chapitre 9

²³ With a meticulous precision in calculating the number of bricks that would be obtained in service to his envisioned reconstruction.

I found Mr. Jefferson at his Poplar Forest estate, in the western part of the State of Virginia. His house is *built after the fashion of a French chateau*, Octagon rooms, floors of polished oak, lofty ceilings, large mirrors betoken his French taste, acquired by his long residence in France (Flowers, 1816. As quoted in Chambers, 1998. p. 106).

Mr. Flowers recognizes a particular French approach to the environment at Poplar Forest in his description, it is this recognition on the part of the English visitor that seeks a response.

As Director of the then newly founded Department of Art & Architecture (1919) at the University of Virginia and as Chairman of the Thomas Jefferson Memorial Foundation's Restoration Committee (1924-1955) Kimball held authority over scholarly research on Jefferson's architectural output. The material investigation of historic preservation continues in Kimball's tone when historian Howard Rice comments in *L'Hôtel de Langeac, Jefferson's Paris Residence: Résidence de Jefferson à Paris, 1785-1789*, written on the initiative of Fiske Kimball, that Jefferson's Paris residence, designed by an eminent architect Jean-François-Thérèse Chalgrin ²⁴ "may have been a source of inspiration to Jefferson." Because the Hôtel de Langeac was demolished in 1842, only scant archival traces of Jefferson's Parisian residence remain. This includes elevations

²⁴ Chalgrin (1739-1811) is perhaps most famous for the posthumously constructed Arc de Triomphe, and during the period of Jefferson's residency in Paris for the Église Saint-Philippe-du-Roule which reintroduced the basilica form into the neoclassical canon. Chalgrin was granted the *Prix de Rome* and followed his architectural studies in Rome from 1759-1763. It is noteworthy that Chalgrin adopted the Roman basilica, which by definition, was a secular building adopted by the early Christian church in lieu of temples with pagan connotations. Chalgrin, however, adds a Doric temple front, with an ionic interior, prioritizing the interior over the public facade. One of the major innovations that Jefferson includes in the reconstruction of Monticello, and indeed at Poplar Forest, is this interiorized, lateral hierarchy of the classical orders. Kimball too furthers our knowledge of the role which French architecture played in Jefferson's architectural education in his discovery of a photograph of the demolished Christ Church in Charlottesville, Virginia which used Chalgrin's church as its inspiration.

(Figure) and a floorplan drawing (Figure 7) of the mansion, as well as a brief description in a period guidebook to be discussed in the following chapter.

Howard Rice was head librarian of the American Library in Paris, and as a research librarian had the benefit of access to the archives at the *Bibliothèque Nationale*, where he found Chalgrin's drawings of Jefferson's residence in Paris, the Hôtel de Langeac. The plan indicates the presence of a lantern—a form of skylight—lighting the ground floor gallery space. Unfortunately, any physical evidence of Jefferson's presence at the Hotel de Langeac disappeared in the demolition of the Hôtel de Langeac in 1842, only one year before Jefferson's Poplar Forest would be consumed in flames. Of the Hôtel de Langeac, the American expatriate archivist, Howard Rice, writes in 1953 under Kimball's watchful eye that Chalgrin's Hôtel de Langeac: "possibly influenced Jefferson." It is noteworthy here that the absence of an extant structure as physical evidence of Jefferson's experience of living in the Hôtel de Langeac suggests that , in Langlois' terms "it did not occur." The evidence of this study will demonstrate that the aesthetic experience in fact did occur and is essential to our understanding of Thomas Jefferson's architectural education.

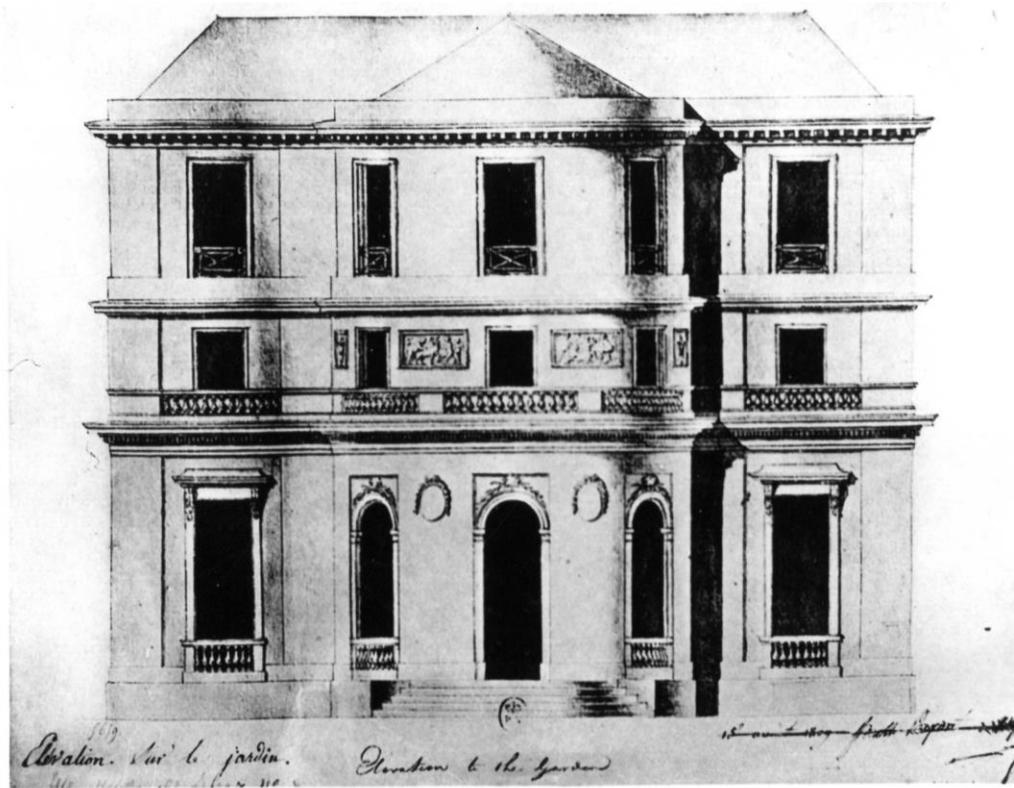


Figure 6. Hôtel de Langeac. Garden Elevation. Jean F.T. Chalgrin Architect. Note that the placement of the cornice brings emphasis to the garden level of the pavilion. Chalgrin's composition prefigures those houses designed to appear as a single-story, in particular the Hotel de Salm with which Jefferson was "violently smitten." The arrangement denigrates a vertical hierarchy, as expressed in the classical canon, thus equalizing the linear relationship to environment. Furthermore, like the Hotel de Salm, and indeed Monticello, the central room projects into the environment while remaining in contact with the principle mass. Poplar Forest, by contrast, is a self-contained relationship, and every axis is extended into the natural world.

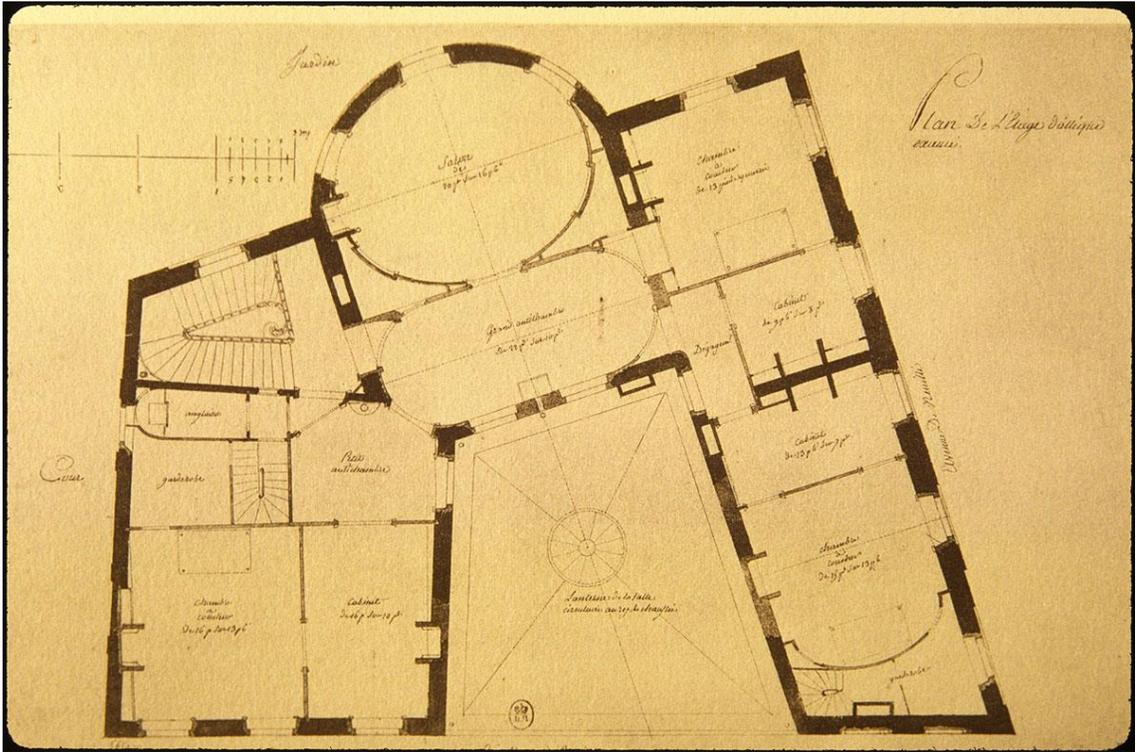


Figure 7. Hôtel de Langeac, Floorplan

Kimball's research is principally archival, and his conclusions may be questioned on the premise of his methods and his lack of experiential, spatial understanding. Kimball gives only narrow insights into the qualities which define French thought, philosophy, and aesthetic theory—the cultural knowledge embedded in architecture of Jefferson's period. Kimball's pattern of treating historic architecture as a mechanical process does not fully answer the purpose of architecture, nor for that matter what architecture means in humanistic terms. While beneficial to the objective of assigning authorship as well as

to the conservation of historic fabric, its conclusions risk disregarding the opportunities for deeper understanding of human nature when the historic record falls silent.²⁵

In 1987, as The Corporation of Thomas Jefferson's Poplar Forest is first opened to the public in a "pre-restoration" phase ("About Poplar Forest | Historical Places in Virginia," 2018), C. Allen Brown, a Graduate of the University of Virginia's architectural history program, founded by Kimball, completed the thesis *Poplar Forest: Thomas Jefferson and the Ideal Villa* which concludes that:

Due to the uncertainty of the original interior details (lost in the 1845 fire) a complete restoration of the inside of the house must rely on considerable conjecture, so much so that any attempts to return the interior might be properly classified a "reconstruction" (Brown, 1987).

As one of the character-defining features of the reconstructed Poplar Forest, the central, top lit, dining hall is the principal object for which the current investigation seeks a response. Why did Jefferson make this particular choice? If the unique arrangement of space is intentional, what is its meaning? Brown relies upon a preconceived typology in his critique of Poplar Forest: "Its villa character is revealed in the open and unconventional plan with the dining hall at center²⁶ ... the suggestion of informality and entertainment posed by this arrangement would be rather inconvenient for daily use." A

²⁵ Kimball's conclusions appear to form a thesis around concepts of political force of national character. Kimball's subtle Anglo-centric conclusions oppose Jefferson's own.

²⁶ Brown's statement does not consider the programmatic relationship outside of its functional capacity. More meaningful to present purposes is an essay by Cécile Lestienne, titled "La Salle à Manger 1750-1800: Triomphe du Programme, ambiguïté de l'Usage": "Dans les petites maisons suburbaines, le plus souvent de plan centré, les salles à manger ont tendance à être placées au centre de la distribution." (p. 177. Baudez, 2017) Translates as: "In the small suburban houses, most often with a central plan, the dining room is typically placed in the center of the composition."

functionalist analysis of other houses of the period is implied in Brown's conclusion and offers no insight into Jefferson's intent.

Jefferson's instructions for the manner of construction of the flat roof and the skylight over the central space are the only specifications in Jefferson's hand related to Poplar Forest known to exist (Chambers, 1998, p. 124). According to Brown, we have no answer, aside from a question of convenience, to explain why it exists.²⁷ A reassessment of Jefferson's architectural philosophy warrants further investigation if our purpose is to discover how one's experience of Jefferson's Poplar Forest skylight conveys meaning, and if the experienced meaning was that intended by Jefferson. In the United States, however, the domination of materialist derived history continues to influence scholarly views of Poplar Forest in the late twentieth century. The reading of twentieth century interpretations of Poplar Forest makes it clear that we must look outside the existing doctrine on Jefferson's architectural praxis to uncover a meaningful transmission of Jefferson's ideas about architecture. To date there has been no questioning of Jefferson's architecture through any, save the materialist lens; however, "taking reason for our guide instead of [English] precedents, the habit of which fetters us" (Jefferson, 1789) we can ask new questions of the historic record.

²⁷ Jefferson's granddaughter Ellen writes to her mother from Poplar Forest: "Cornelia [Ellen's sister] does not appear to have remarked the additional gloom in the appearance of our dwelling, but has been fretting all the morning over the loss of the sky-light, which darkens the dining room so much that she cannot draw in it ..." (Ellen W Randolph to Martha J. Randolph, July 18, 1819, Nicolas P. Trist Papers, University of North Carolina, Chapel Hill)

Alternative Paradigms

Ever since the rise of ‘philosophical nationalism,’ Anglo-American political philosophy has never lacked reasons for closing its borders and refusing to engage thinkers beyond them. It was said that Continental thought was either too abstract, too metaphysical, too speculative, too historical, or simply irrelevant to the task of ‘clarifying our concepts and intuitions’ ... preserved as if in amber, venerated, and defended with a passionate dogmatism of which only Americans are capable, and of which Tocqueville²⁸ remains the supreme analyst (Lilla, 2014).

To engage thinkers beyond the closed borders of “philosophical nationalism,” which in architectural terms includes the materialistic historicism which preserves—“as if in amber” the relics of our cultural heritage—we turn now to an alternative body of literature which echoes those philosophies with which Jefferson would be familiar.

Gestalt

Writing from another point of view, the analytical approach taken by *Von Ledoux bis Le Corbusier (From Ledoux to Courbusier)*, published in 1933 by a Viennese banking employee, Emil Kaufman, seems to mark an interruption in the materialist, mechanistic view of architectural history as it was taught in America.²⁹ Kaufman had earned his doctorate at the University of Vienna with research in the development of the

²⁸ Alexis Charles Henri Clérel, Viscount de Tocqueville, French diplomat, political scientist and historian (1805—1859). “Tocqueville learned from Jefferson, from the American mind-set which Jefferson had helped so much to create. On these matters, the chain of ideas presented in *Democracy* is remarkably like that found in *Notes on the State of Virginia* and other Jefferson writings. But overall, Tocqueville did not so much as learn from Jefferson (even from the Jefferson of 1785) as share a heritage with him, agree with many of his opinions, and resonate to a certain fellowship of spirit and intellect.” —from *Jefferson and Tocqueville*. 1991. James T. Schleifer. College of New Rochelle Faculty Publications.

²⁹ And indeed, in the Ecole des Beaux-Arts, whose historicism dominated architectural education well into the twentieth century.

neoclassical in the final quarter of the eighteenth century, during which time Claude-Nicolas Ledoux (1736-1806) is at his most productive.³⁰ Kaufmann is credited with being the only person in his field of neoclassical architectural theory at the time of his immigration to the United States prior to World War II. Kaufman achieved a “formal analysis and theoretical writings to exact social-historical significance.”³¹ *Von Ledoux bis Le Corbusier* posits that the origin of twentieth century modernism is founded in the work of Claude-Nicolas Ledoux (1736-1806). Ledoux concretizes the shift from individual versus the masses, to a mass of individual parts. According to Kaufmann, clarity in visual organization and the ordering of visual chaos of individual parts by clear articulation of those parts, permeates Ledoux’ aesthetic sense.

As a continuation of Kaufman’s thesis, *Three Revolutionary Architects: Boullée, Ledoux and Lequeu* was presented to the American Philosophical Society in 1952, eliciting a brief response from Kimball in the *Arts Quarterly*.³² Kimball offers no insight into the content of Kaufmann’s claim, merely stating that Kaufman is aware of previously unpublished documents. But of Kaufman’s claim that Ledoux’ “autonomous” *architecture raisonnée* [Kimball’s term] prefigures modern architecture, Kimball states: “of such influence, either direct or remote, they had essentially none.” Kimball justifies his dismissive attitude (which runs counter to the materialist theories of his own research)

³⁰ Claude Nicolas Ledoux’ reputation suffered greatly from the height of his fame and would not revive until Kaufman identifies Ledoux as one of the founders of the modern era.

³¹ A more complete description of Kaufman’s contributions to our understanding of architectural history is currently available via: <https://dictionaryofarthistorians.org/kaufmanne.htm>. The Introduction of Anthony Vidler’s *The Writing of the Walls* (1987), updates the role Kaufman’s research played in renewing our assessment of late eighteenth century French architecture.

³² It is worthy of mention that Jefferson was an active member of this same society from 1780 and served as President of the Society from 1797-1815.

with: “The fact is that France was meantime losing essential dominance in architecture [when seen from the perspective of the English] and becoming a belated conservative in adherence to the classical.” What Kimball refuses to acknowledge in Kaufman’s assessment is the emergence of gestalt, that is “the study of perception and behavior from the standpoint of an individual’s response” (Merriam-Webster Inc, 1995. p. 259). Mind cannot be evidenced in Kimball’s system; and this is very telling of Kimball’s own conception. The exterior world of objects, in this view, is of greater influence, than our conception of them.

To date, no attempt has been made to reassess Jefferson’s architectural imagination in light of the renewed understanding of *architecture raisonnée* which Kaufman presented, and which has now been further developed by historians, particularly Continental historians.

Material Culture: Orienting the Mind-Body Duality

In *Religion and Material Culture: The Matter of Belief*, David Morgan (1940-Present) describes belief as the socio-cultural framework through which we examine the relationship between body and mind. To paraphrase Morgan: individuals within a society share a common knowledge of the value of a given object according to a shared system of belief. In turn a shared knowledge influences the production of such objects.³³ It is

³³ Similarly French social psychologist Serge Moscovici (1925-2014) seeks to determine the formation of social representation by way of a "system of values, ideas and practices with a twofold function; first, to establish an order which will enable individuals to orient themselves in their material and social world and to master it; and secondly to enable communication to take place among the members of a community by providing them with a code for social exchange and a code for naming and classifying unambiguously the various aspects of their world and their individual and group history." While Moscovici, introduces the formation of a collective common sense rather than an individual belief, he relies on a cognitive image,

through a shared knowledge that objects become cultural signifiers. Symbolic space serves as an image of a type of space which brings forward the system which generates a particular reality. Morgan is describing the potential for space to act as the embodiment of an ideal, as opposed to the representation of the ideal. Inherently this potential exists within the designer's belief system as intent, in turn, it is intent which has given rise to the built environment. In the case of Poplar Forest, unless the intent is to be purposely inconvenient, the impracticality of Poplar Forest's dining room skylight clearly indicates a purpose, or intent, of a more idealistic quality. When one acts upon the environment with intention to order, or re-arrange order, the individual expression, or act, is a concise expression of will to shape the environment according to a belief. Morgan concludes that: "Architecture is necessarily a product of mental space—the accumulated histories of individuals in space." The cognitive image with its related intention is reflected in the reality of the interior space itself. Morgan's framework implies a self-identification, as well as a communal identification, an awareness of self as a part of a defined system in which culture, and the transmission of culture, operates on an individual, an interpersonal, and on a communal level of the mind—*cogito, ergo sum*.

Broadly speaking, Morgan's framework offers a point of entry to questions of the transformative role that the experiencing of beauty holds in shaping our environment, as well as the transactions at play between environment and social order.

rather than object to drive his conclusions. Morgan, meanwhile, seeks the relationship between physical environment and cognitive image (mind).

Belief is a broad orientation that emerges from the habits absorbed in childhood or at other times in life such as conversionary periods when ... the mind is powerfully opened under conditions of duress or crisis to absorbing fundamental new patterns. Belief is a shared imaginary, a communal set of practices that structure life in powerfully aesthetic terms. Belief is perhaps best framed as a pervasive community of feeling because the holding that it involves is public and verifiable when it consists of holding to other people and the institutions they share. (Merriam-Webster Inc, 1995)

Within the reflective framework the mechanism of innovation, “the conversionary force” of cultural production opens the passage from the mundane to higher states of consciousness:

Architecture is ultimately paradoxical in terms of its accommodating nature and the manner it produces space and apportions its regions and localities. Architectural settings can allow for the improvement and betterment of the conditions of the built and natural environment in which they are emplaced, or they can contrastingly hinder and obstruct the emancipating possibilities of the given milieu that interactively receives them. Architecture dialectally facilitates constructive societal evolutions, transformations, and edifications (Emmons, Hendrix, & Lomholt, 2012. p. 202)

The attitude which Jefferson expresses in writing shows that his experience was indeed “conversional”; moreover, the emancipating potential of the architecture which Jefferson experienced in France was a means by which he was able to materialize his beliefs in the self-realization of the individual, this in turn allowed him to communicate such resolutions as he found them in French architecture to a larger community of individuals as a validation of society’s pursuits—life’s pursuits—Poplar Forest in this instance, contains a history and communicates the memory of the new patterns which he had absorbed from his experience. Jefferson’s new patterns embodied meaning more clearly than the mechanical manifestation that qualifies as proof in Kimball’s lineage of history.

Re-enlightenment: Immanence and Transcendence of Selfhood

As a response to the philosophical basis of the Enlightenment, Philosopher Luc Ferry (*A Brief History of Thought*, 2011) holds a view which escapes the existential will to power theories of his twentieth century contemporaries as a

reaction to anti-humanist philosophies which consider humanity to be the ‘pure products of an unconscious exterior or material reality which seeks to define us bit by bit, whether by our social class, our social milieu, or our sexual impulses.’³⁴

Ferry focuses on three principal objectives of philosophical pursuit: theory, ethics, and salvation. He asks: What is the nature of the world? How are we to act in it? and What should an individual’s ultimate goal be? Furthermore, he states:

We create with our most beloved, an apprenticeship of the fact that we are prepared to transcend ourselves, to accept the transcendence of the other, thus discovering or rediscovering the sacred and meaning, that we can also mobilize ourselves for causes which touch future generations ... that which arises in the self [immanence], everything transpires as if the values are imposed on one’s subjectivity, as if they are coming from beyond the self (transcendence)³⁵ (Ferry, 1993).

Through Ferry’s eyes, we risk the loss of Jefferson as an historic fact, a data point in an evolutionary history, and potentially regain Jefferson as a fellow human, a human in

³⁴ Translated from the French by the author: “... les purs produits inconscients de réalités extérieures ou matérielles censées nous déterminer de part en part, qu'il s'agisse de notre classe sociale, de notre milieu d'origine ou de nos pulsions sexuelles Louis Corneiller. (2011) “Luc Ferry, un philosophe pour notre temps.” *Le Devoir*. Source: <http://www.ledevoir.com/opinion/chroniques/327502/essai-luc-ferry-un-philosophe-pour-notre-temps>

³⁵ Translation by the Author from the French: “... nous faisons, avec nos proches, l'apprentissage du fait que nous sommes prêts à sortir de nous-mêmes, à admettre la transcendance de l'autre, donc à trouver ou retrouver du sacré et du sens, que nous pouvons aussi nous mobiliser pour des causes touchant les générations futures ... Quoique situées en moi [immanence], tout se passe comme si ces valeurs s'imposaient à ma subjectivité, comme si elles venaient d'ailleurs [transcendance].”

pursuit of happiness. This pursuit of Jefferson has as its aim “reasserting liberal humanism and its human-centered ethic as against any ethic that treats human beings as merely species or merely a thing within nature.”³⁶ Over the course of the modern era, it becomes clear in secular philosophy and the related traditions which Jefferson sought to establish, that the sacred only becomes intelligible to us through the ideas we articulate of it. We recognize Jefferson’s intent, a teleological truth, when we set aside forms as determined by national temperament³⁷, and focus rather on ideal forms, the natural world as “the foundation of those superstructures which have been raised in the Physical and Moral sciences” (Jefferson, 1789).

The results of such a view are measurable, as neuroscientist, Steven Pinker suggests: “To restate the ideals of the enlightenment in the language and concepts of the 21st century ... with data. This evidence-based take on the Enlightenment project reveals that it was not a naïve hope ...” (*Enlightenment Now: The Case for Reason, Science, Humanism, and Progress*. 2018). Jefferson would be pleased by the tangible results of experimental philosophy. In his own period, however, Jefferson, as well as his peers in architecture, made aesthetic choices motivated by:

The practice of sacralizing humanity—the practice of experiencing the Sacred ‘through the idea’—affects the mode of being of the self (Smick, 2017).

³⁶ Kenneth Anderson (1995). “Our Natural Selves (Review of Luc Ferry, *The New Ecological Order*, and Michael Zimmerman, *Contesting Earth's Future: Radical Ecology and Postmodernity*)” *Times Literary Supplement*, London, September 8, 1995.

³⁷ Kimball’s methodology defined architecture according to its national temperament, often in ways which recall Buffon’s argument concerning the inferiority of American species. Jefferson refuted Buffon by delivering a moose to the French biologist’s collection.

Selfhood, the individual agency, emerges from Jefferson's world, as in the realm of neoclassical thought and architecture. The fundamental human values of truth, beauty, justice and love are aspirations with eighteenth century roots. In a modern reassessment of this evolution towards selfhood, Ferry condenses the arc of history:

The first (cosmological) 'principle of meaning' apparently 'appears with the Odyssey: to live well you had to journey from chaos towards reconciliation with the cosmos. The second (theological) principle, holding sway from Christ's death until the Renaissance, found harmony in obeying God's laws. Then came the revolution of subjectivity and 'the first humanism: a man was in some way 'saved' ...when he laid his own brick in the edifice of human progress.'³⁸

For Jefferson and his contemporaries, the bricks that will create a new edifice are formed from the Earth itself, from "Nature's God" and is "tantamount to the rational organizing principle of the universe and is thus radically different than the providential, moralistic creator of the classical tradition" (Cooper & Dyer, 2017). Stated otherwise: Man, through his capacity for Reason and his comprehension of the order of Nature, is to be his own savior.

³⁸ <https://www.timeshighereducation.com/books/on-love-a-philosophy-for-the-twenty-first-century-by-luc-ferry-translated-by-andrew-brown/2003790.article>

The thinkers of ... the Enlightenment saw an urgent need for a secular foundation for morality ... They laid the foundation in what we now call humanism, which privileges the well-being of individual men, women, and children over the glory of tribe, race, nation, or religion. It is the individuals, not the groups, who are sentient—who feel pleasure and pain, fulfillment and anguish ... it was the universal capacity of a person to suffer and flourish, they said, that called on our moral concern. (Brown, 1987)

Aesthetic choice, or taste, as a moral question however, raises another paradox within the structure within which it has been emplaced. Is the physical world alive—responsive to consciousness? In what sense do physical bricks hold human ideals? The silence of mechanistic concepts guides us back to Bacon's assessment, and to Newton's, as well as to Jefferson, for in the Age of Reason, in the Age of Enlightenment, the greater command over nature, nature's magic in Bacon's sense, is the pursuit of science. However:

it has been difficult to forge a scientifically precise concept of wholeness. The idea places demand on science which stretch the very notions of scientific inquiry, since they require a view in which value, and the notion of the whole, and the inclusion of the observer in the description of what is observed, seem to be at odds with scientific method; yet must be included in order to reach results ... The harmony of a given road or building with its landscape can only be understood, and made profound, if we have a picture of the wholeness that is being harmoniously adapted. The adaptation of the light and movement in a building lobby can only be understood if, once again, we have a picture of the structure of the whole which is supporting the adaptation. A window in a wall—its well-placed, well-sized, well-designed, according to its harmony within the whole—and to do it well, we need to understand the whole. (Mehaffy, 2006)³⁹

³⁹ For a more complete post-structuralist conception of Christopher Alexander's work, see: "The Concept of Wholeness, Some Sober Reflections on the Nature of Architecture in our Time." *Katarxis* no. 3.

In the late twentieth century (post)modern perspective the holistic relationship of form and the mechanics of matter have been severed, and for this reason it is “rare that someone actually figures out how something works.” (Mehaffy, 2006).

The Nature of Order

The Nature of Order (2003-2004), by Christopher Alexander, offers a view of “a human-centered universe, a view of order, in which the soul, or human feeling and the soul, play a central role.” Alexander speaks definitively that the foundation of architecture is something which resides in human beings, and that “human feeling is a form of measurement.” Alexander’s work creates a conception of the order of nature as both objective and structural (hence a part of science)—but which remains personal in that it shows why things have the power to touch the human heart.

Taken as a whole the four books create a sweeping new conception of the nature of things which is both objective and structural (hence part of science) – and also personal (in that it shows how and why things have the power to touch the human heart). A step has been taken, through which these two domains - the domain of geometrical structure and the feeling it creates—kept separate during four centuries of scientific thought, have finally been united. (Alexander & Alexander, 2004)

Alexander’s insights provide yet another facet through which to regain a perspective on the landscape of Jefferson’s imagination. Jefferson’s radical dedication to establishing a foundation for the American Republic, based upon classical thought, has been fraught with upheaval, by expansion, and by social, political, and industrial revolution. Our current understanding of Jefferson’s ideals emerged through the efforts of a discipline of historical inquiry based in scientific principles foreign to Jefferson himself, and as a

result, we are missing something of Jefferson's enlightenment spirit. Scientific inquiry has preserved the historic fabric of Jefferson's architectural production, even while the sciences used to investigate Jeffersonian architecture distances us from its philosophical essence.

Via the "radical new conception" of Alexander's *The Luminous Ground* we begin to see "consciousness as the underpinning of all matter" and that at the heart of building "our analytical thinking selves, and our vulnerable emotional personalities as human beings—are coterminous, and must be harnessed at one and the same time" and that "a spiritual, emotional, and personal basis must underlie every act of building or making" (Alexander & Alexander, 2004).

Relevance

The body of literature reviewed in the second half of this chapter temporarily sets aside the existing scientific-evidence based history of the built environment in order to approach something akin to the mindset of the enlightenment period in which Jefferson operated. By bracketing our current understanding aside, we approach something akin to the mindset of the enlightenment period in which Jefferson operated. These alternative paradigms generate a need to reassess our history—our cultural aspirations—by way of understanding human consciousness, perception and behavior from the standpoint of the individual's response.

In such a paradigm we can experience space as the active embodiment of an ideal. All of the perspectives presented above all recognize the reality of the subjective world—the relationship between body (objective reality) and mind (subjective

experience); that architecture is a product of mental space, of memory, self-identification, communal identification, and the transmission of mind in built form; that architecture acts as a conversionary force; and that beauty can be transformative in shaping the social order, just as it shapes the individual. Immanence, the emergence of selfhood, is a sacred work, and the sacred becomes intelligible to us through the ideas we articulate of it, reminding us that the practice of experiencing the Sacred ‘through the idea’—affects the mode of being of the self. The environments we build through human reason—human consciousness—form a whole system, for human reason is tantamount to the rational organizing principle of the universe. These alternative principles allow us to see our connection to the environment as more than the winding down of some cosmic clock hurdling ever forward to meet the darkness.

The preceding chronological hop, skip, and jump through reading offers a theoretical structure around, and view of, Jefferson’s thinking about design. The voice of 1789 in Paris spoke, wrote, and dwelled within the principles just described. To become familiar with Jefferson’s intentions in architecture it is essential to be mindful that

with all his extraordinary versatility of character and opinions, he seemed during his whole life to breathe with perfect satisfaction nowhere except in the liberal, literary, and scientific air of Paris in 1789.⁴⁰

We cannot know with certainty the extent of Jefferson’s imagination with regard to these ideas, but we can offer a range sufficient to demonstrate the materialization of

⁴⁰ Henry Adams, *History of the United States of America during the first Administration of Thomas Jefferson* (New York, 1889, 143-146, in Chapter 5, “Intellect of the Southern States.” as quoted from: Rice, H. C. (1976). *Thomas Jefferson’s Paris*. Princeton, N.J: Princeton University Press.

concepts into the built environment of Poplar Forest to support such a claim. Freed from the empirically directed observations and assumptions of Jefferson historian Fiske Kimball, we begin to re-establish Jefferson's architectural philosophy, or "production of the mind" that we may better understand Jefferson's "centre-hall twenty feet square, lighted from above." By doing so we can unfold the question as to why Jefferson choose to install a skylight at Poplar Forest, and ask instead: What are the philosophies which gave meaning to the environments of enlightenment France? What is the nature of Jefferson's encounters and experience with these environments? What signs exist that Jefferson was responsive to these environments? Such questions establish the intent, the state of being which give rise to Jefferson's image of the skylight. The formation of Jefferson's cognitive image of Skylight will tell us why Jefferson installed his own skylight at Poplar Forest.

A final element necessary for the investigation of the emergence of an image (the original language of cognition) or the appearance of some object (like a skylight) is the framework we use to investigate the "life world" of that object. The creative act of building—of bringing some form into existence—requires us to bring forth an identity against all other potential identities. Ultimately the fact of a thing's existence is shaped by an ordered structure of its being in the world. Methodology is the ordered structure which gives birth to the meaningful results of our image-making (quite literally imagination). The methodology used to investigate Jefferson's skylight emerged late in the period of study, and only by way of inductive reasoning did the evidence collected during the period of research suggest a phenomenological framework as the most suitable

framework for making sense of the collected evidence. That phenomenology is ultimately reflective within this study is either purely fortuitous, or not.

CHAPTER III

METHODOLOGY

We must conceive before executing. Our forefathers built their huts only after conceiving an image of them: it is this production of the mind that constitutes architecture.

—*Étienne-Louis Boullée (1728-1799) From Essay on the Art of Architecture*

This thesis is an investigation into a special problem for historians and designers who wish to access the knowledge embodied in historic environments—the substantive, yet invisible, foundation upon which we build.⁴¹ The implications resulting from archival research reach broadly into the relationship between our conceptualization of the built environment as external object and the subjective experiences we engage to shape the environment. This relationship, or more precisely, the lived experience of this relationship, form an acquaintanceship with the substantive nature of consciousness in defining a culture.

The insight of architectural theorist Christian Norberg-Schulz (1926-2000) was used to inform the re-establishment of Jefferson’s architectural imagination within the structural, material, and archival evidence of Jefferson’s architectural production.

Christian Norberg-Schulz’ *Intentions in Architecture* (1992) provides a construct for a

⁴¹ “We have little understanding of how taste cultures have been structured and how they changed over time ... the ahistorical nature of environmental design research makes it difficult to make predictions of change with accuracy but certainly will enhance our ability ... We have only limited knowledge about behavior opportunities, the interaction of value systems, and the choices people make, and so our ability to discuss these issues is restricted.” (Lang, 1987)

theory of architecture which considers architecture “as a whole, of which the individual parts are mutually interdependent ... in an attempt to survey all of the ‘dimensions’ which may be imagined to enter a work of architecture.” (Norberg-Schulz, 1992). This approach differs from the view held by Kimball, and subsequent generations of historians, concerned principally with the *techne* of architectural production as it extends its role in the chronology of American architecture in general.

While the practically derived *techne* is useful in analyzing a structural system, a holistic approach requires the deliberation between structural/material systems and the syntax of their “eternal and immutable forms,” the metaphysics, in Sir Francis Bacon’s sense.⁴² Norberg-Schulz states:

The technical systems cannot be described without referring to the formal properties, while the formal structure is completely covered by the syntactical dimension itself. As a totality, the work of architecture ... does not *describe* the world, rather it unifies some of its aspects in a new meaningful whole (Norberg-Schulz, 1992).

The twentieth century scholarship on Jeffersonian architecture offers copious information concerning structural, stylistic, and material systems, as well as the social context of Jefferson’s production. Norberg-Schulz, however, offers an alternative method of interpreting the existing research of Jefferson’s built environments against Jefferson’s aesthetic experience. By way of a phenomenological investigation, we may look to form (the products of Jefferson’s technical experience) as a manifestation of higher objects, so that we may understand a real architectural experience. Boullée’s *Essaye* which forms the

⁴² This is a reference to Part One: Philosophical Background in Chapter IV.

epigram of this chapter, warns the architect against rationalizing experience. Boullée is explicit in his distinction between sensing and reasoning:

The only way that artists should communicate among themselves is by recalling forcefully and vividly what has aroused their sensibility; it is this attraction, which belongs to them alone, that will permit them to stimulate the fire of their genius. They should be aware of entering into explanations which belong to the realm of reason, for the impression an image makes on our senses is subdued when we dwell on cause that has produced the effect (Boullée, n.d.).

Boullée's statement appeals to the architects' imagination in forming a conception of the physical reality in which humanity dwells. The subduction of subjective experience by reason lies at the heart of phenomenological understanding. Take for example a statement in *The Stanford Encyclopedia of Philosophy* which parallels Boullée:

Conscious experiences have a unique feature: we experience them, we live through them or perform them. Other things in the world we may observe and engage. But we do not experience them, in the sense of living through or performing them. This experiential or first-person feature—that of being experienced—is an essential part of the nature or structure of conscious experience: as we say, “I see / think / desire / do ...” This feature is both a phenomenological and an ontological feature of each experience: it is part of what it is for the experience to be experienced (phenomenological) and part of what it is for the experience to be (ontological) (Smith, 2018).

Norberg-Schultz' interpretations assisted in defining the universal themes of the enlightenment experience assumed by Jefferson, as well as Jefferson's communication of those manifest forms into his conceptualizing of Poplar Forest. Norberg-Schutz defines Architecture according to “Functional, Technical, and Aesthetic aspects.”⁴³ The

⁴³ As Norberg-Shultz points out these three virtues go back to Vitruvian concepts of *firmitas*, *utilitas* et *venustas* in *De Architectura I*, iii, 2.

interrelation of these aspects to the building's task (*telos*), form, and technics (*techne*) will, according to Norberg-Schultz respond to its phenomenological origins (Norberg-Schulz, 1985).

What is Phenomenology?

“Phenomenology is an inductive qualitative research tradition rooted in the 20th century philosophical traditions of Edmund Husserl (descriptive) and Martin Heidegger (interpretive)” (M Reiners, 2012). The origin of phenomenology is in Husserl's intent to understand phenomena in their own terms—'to provide a description of human experience as it is experienced by the person herself' (Bentz & Shapiro, 1998, p. 96) and allowing the essence to emerge (Cameron, Schaffer & Hyeon-Ae, 2001). Rather than explaining, or measuring results, phenomenological research seeks to describe a lived experience in order to increase the researcher's understanding of underlying themes. The word *understand* here does not mean scientific knowledge; it is rather an existential concept which denotes the experience of meaningful dwelling.

What is advocated here is not some kind of environmental determinism. We only recognize the fact that man is an integral part of the environment, and that it can only lead to human alienation and environmental disruption if he forgets that. To belong to a place means to have an existential foothold, in a concrete everyday sense (Norberg-Schulz, 1992).

Phenomenological research focuses on the whole of a given experience, rather than the conclusions reached by reduction of individual parts. It does not test a hypothesis, nor are results expected to be predictive, or reproducible.

It would do a great injustice to human phenomena through over-analysis, removal from the lived contexts of the phenomena and worse possibly reducing phenomena to cause and effect (Groenewald, 2004).

Phenomenological research is applicable to a single case, or to deliberately selected sample cases. Because this investigation seeks to encompass the whole structure (Poplar Forest in this instance), in order to understand a single building element (the skylight), results are transferable to any other part of the structure which supports that material, including cultural values and the framework which forms cultural values.

Individual variations or unique themes are as important as commonalities with regard to the phenomenon researched. Therefore, the methods which we value to understanding our environment are also self-expression in that we displace ourselves in the formation of knowledge. Consciousness is entangled with that which we create, however, detached we imagine ourselves to be (Groenewald, 2004).

The Methods of Phenomenology

In his *Guidelines for Phenomenological Analysis*, Richard Hycner writes: “the phenomenon dictates the method including even the type of participants” (Hycner, 1985).

Phenomenological researchers largely work with an open process rather than with predetermined, fixed methods or procedures. As Moustakis states:

No sequential steps are laid out in advance ... each research project has its own detailed sequences that depend on data available, the interpretations and experiences of the research, and the contingencies that influence and guide the research (Moustakas, 1994).

The open process of phenomenological investigation allows for an inductive process through which theory grows out of data and is grounded in that data.⁴⁴

Data is obtained through a critical analysis of available archival information, a critical reading of secondary sources concerned with the historic environment(s) under investigation, and most importantly, through the hermeneutical critique of the historic environment.

Bracketing/Phenomenological Reduction

Phenomenological reduction, or bracketing is not related to the reductionist natural sciences methodology: “It is the existential immediacy of the phenomena through personal experience” (Groenewald, 2004). Bracketing for the purpose of historic research asks two essential questions: 1) what is the phenomenon? 2) what is our experience of the phenomenon? These questions limit the range of responses we may ask of historic environments and limit the scope of research to the phenomenon being investigated. The response to these questions defines the outer limits, or scope of the phenomenon and identify what Carl Jung refers to as *facultas praeformandi*, roughly the preformed [idea] which facilitates the emergence of an archetype (Jung, 1969). Husserl builds upon this preexistence in *Cartesian Meditations*:

An order of cognition, proceeding from intrinsically earlier to intrinsically later cognitions; ultimately, then a beginning and a line of advance that are not to be chosen arbitrarily but have their basis “in the nature of things themselves” (Husserl, 1999).

⁴⁴ The process described by Moustakas recalls the inductive process of experimental philosophy used by Sir Isaac Newton, see Part One: Philosophical Background in Chapter IV.

For Husserl, the phenomenological investigation has a definite object of investigation, as distinct from any other object, while Jung is describing the emergence of objects. The two ideas are presented together here to highlight the importance to phenomenological investigation of understanding the object [phenomenon] on its own terms, and the intersubjectivity of object and the experiencer of the object, for we must:

neither make nor go on accepting any judgment as scientific ... not derived from evidence, from 'experiences' in which the affairs and affair-complexes in question are present to me as 'they themselves' (Husserl, 1999).

Having established that a thing exists, the phenomenologist seeks to understand more distinctly, what is this thing that exists. This understanding requires explication.

Explication

The term "data analysis" is deliberately avoided because analysis has dangerous connotations for phenomenology.

The term [analysis] usually means a 'breaking into parts' and therefore often means a loss of the whole phenomenon ... [whereas 'explication' implies an] ... investigation of the constituents of a phenomenon while keeping the context of the whole (Groenewald, 2004).

In preference, the term *explication* is used as a way to transform data through a formal reasoned explanation..

Whatever the method used for a phenomenological analysis the aim of the investigator is the reconstruction of the inner world of experience of the subject. Each individual has his own way of experiencing temporality, spatiality, materiality, but each of these coordinates must be understood in relation to the others and to the total inner 'world' (Hycner, 1985).

The interpretive process is composed of five criteria [“steps” according to Groenwald, however, the term *criteria* is used here in deference to its analytical connotation]. Again, according to Groenwald: “good research is not generated by rigorous data alone ... [but] ‘going beyond’ the data to develop ideas” (Groenwald, 2004). The initial theorizing, however small, begins in the accumulation of qualitative data. Whatever the research hears, sees, experiences, and thinks reflects the process of interpretation. These reflections can be collected in theoretical notes, methodological notes, analytical notes, field notes and are “already a step towards data analysis ... properly speaking ‘part of the analysis rather than the data collection” (Groenwald, 2004). For this reason, bracketing, described in the previous subsection is already a step forward into explication. The interpretive process further treats data according to: A.) Its capacity to identify any significant statements which allows the forming of clusters of meaning; B.) its capacity to inform a textural description, or the relationships among the formerly stated clusters; C.) its structural context; and finally, D.) its most essential qualities, the essential being-ness of the phenomenon (Husserl, 1999).

The hermeneutical process of phenomenological research concludes with a description of the essential invariant structure of the experience under investigation.⁴⁵

While the method of interpretation may vary according to the nature of each investigation, the criteria [steps] discussed are relatively consistent in their use.

⁴⁵ Here reference is made to many other researchers in various fields of endeavor, particularly to Husserl in psychology, Norbert-Schultz and Alexander in architecture, and Ferry in philosophy.

Before passing to a description of the interpretive process used in the current study, a brief definition of these criteria is warranted. A justification of the meaning of these terms is principally derived from Husserl (1999), a description of the process itself is credited to Moustakas (1994), and further codified by (Giorgi et al. 1970; Hycner, 1999; Groenwald, 2004):

Identification/Significant Statements/Clusters of Meaning

In the process of accumulating data the researcher observes patterns emerging from the collection of evidence concerning the experience. The significance of such patterns is deemed as related to the experience, or a reaction (resistance to) the experience. The researcher should not reject as a value judgement the significance of the information obtained, but rather should use the response to formulate clusters of meaning concerning the relationship of experience to experienced object. The response may be either reasoned consciously or intuited unconsciously. The response itself remains as a manifestation of either form of response, and these manifestations identify clusters around which meaning is formed.

Textural Description

The textural description offers context to the response. What form of knowledge influenced the response? The interrelationship of knowledge to response is an operation of consciousness and is therefore inseparable from the experience. The researcher seeks not cause and effect so much as the interweaving of response and experience, the texture, of the experienced phenomenon.

Structural Description

This is an examination of the means by which the experienced phenomenon and the response to the phenomenon are interrelated. How does the subjective reality of each function to influence the other? The structural description accommodates the intersubjectivity of the experience of the phenomenon and the phenomenon itself.

Essential Invariant Structure

Essential invariant structure, or “imaginative” analysis is a description of the interrelationship of meaning, context, and experience into a meaningful system.

Conclusion

Phenomenological research concludes with a narrative statement of the essential invariant structure of the experienced phenomenon as a response to the research question. The narrative response holds an awareness of previously bracketed information (philosophical background) as a means to include the researcher’s own experience with the subject.

A graphic image describing phenomenological investigation (Figure 8) outlines the process. One should note that while each phase of investigation has a distinct boundary, every element contributes to the next in the sequence, culminating in an essential quality. When taken together as a whole system we understand the essence of the phenomenon. The essential invariant structure although individuated temporally, gives us the meaning of the phenomenon. The living poplar flower illustrated in the background to the graphic is related to the seed. Taken together the essential system from

flower to seed, and from seed to flower [the teleological end] is revealed. This is what Husserl intends in his terminology of “being-ness.” Architectural experience may be said to serve a similar function.

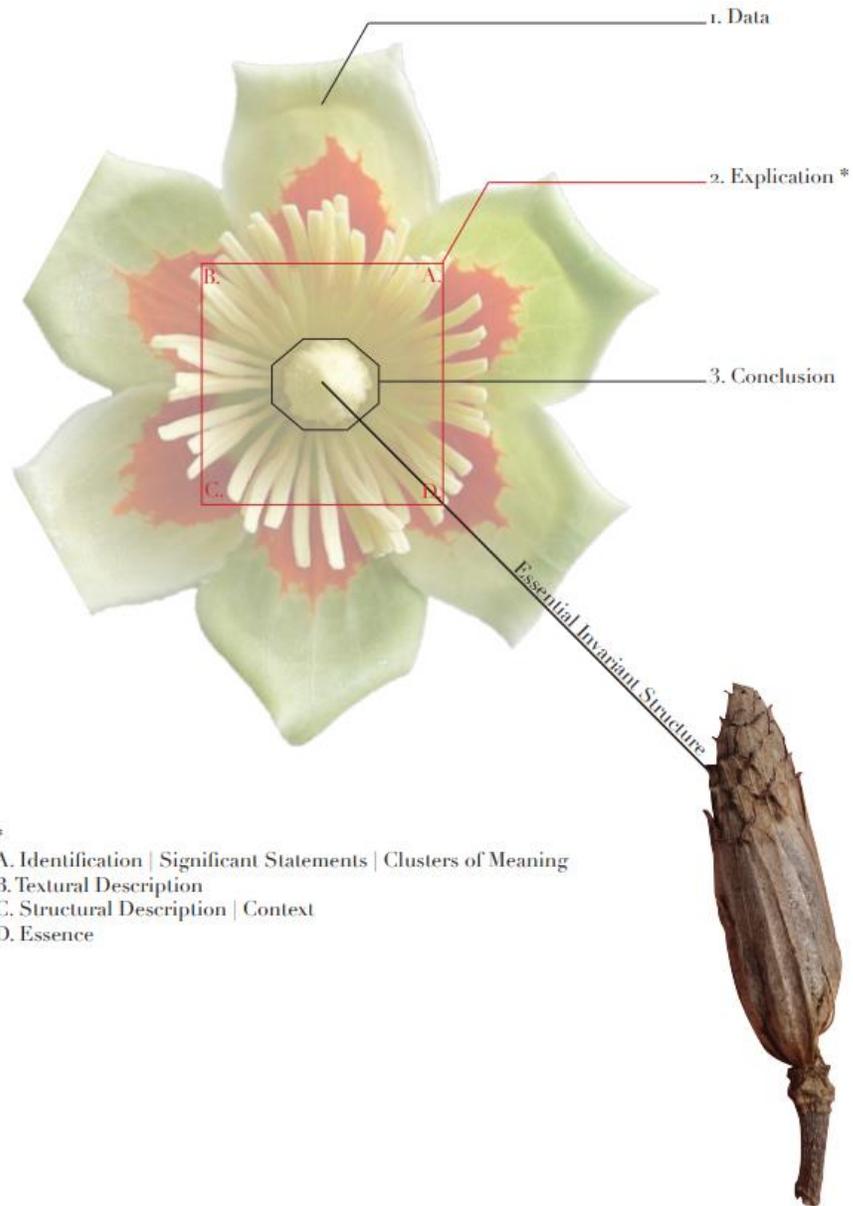


Figure 8. Phenomenological Research Design. Phenomenological methodology is designed as a means to examine the constituent parts of a phenomenon while keeping the context of the whole. Background Image *Tulip Poplar Flower*, 2009 © Mark Birkle, Used by permission of the artist.

Aesthetic Study Precedents

This research emerged from a questioning of aesthetic systems; an investigation as to the nature of beauty. The method of inquiry began as an independent project⁴⁶ with a strategic narrative based on concepts of speculative aesthetics. Speculative aesthetics relies on the “gleaning of intuitive insights into the cognitive relationship between person and environment” (Lang, 1987. p. 182) to support and validate the overarching research question. Although outside the cultural context of the current investigation, an initial research into Japanese and Classical Western aesthetics proved useful in forming general insights into the operation of aesthetic systems and in forming a methodological framework turned to an appreciation of Western cultural aspirations.

Formulating a Research Design

When focused on Jefferson, the speculative, intuitive approach defined by Lang (1987) proved problematic; Jefferson is an individual of the Enlightenment and holds Enlightenment values. In this regard, light, and how Jefferson used light, seem relevant to understanding Poplar Forest. The skylight in the reconstructed Poplar Forest is at once a major character defining feature of the house, as well as a specific example of Jefferson’s use of light.

Questioning Jefferson’s aesthetic choice in his introduction of a skylight furthered the opportunity to expand our understanding of historic environments. A range of

⁴⁶ The results of an investigation of the *Shoin-zukuri* (書院造) style of architecture are outside the cultural context of the current investigation. However, a recent symposium “In Search of the Global Impact of Asian Aesthetics on American Art and Material Culture,” October 12-14, 2018 at Winterthur Museum may prove useful for further insights into Asian influence in the early-Modern period. Also See: “David Hume, the Buddha, and a search for the Eastern roots of the Western Enlightenment.” *The Atlantic*, October 2015

perspectives was found to contribute to our understanding of Jefferson's skylight and the perceived value derived from it. The significant value of mechanical, functional process stood out as the dominant paradigm. Associated with this is the need to establish a factual basis for the study of architectural history. However, this paradigm does not offer opportunities for subjective, experiential understanding, and thus restricts our knowledge of personal, subjective choices in terms of aesthetics. For example, a critical reading of *Thomas Jefferson: Architect* by biographer Fiske Kimball, while demonstrating a rigorous attempt to recognize authorship, failed to satisfactorily respond to Jefferson's architectural education and the theoretical underpinning of Jefferson's aesthetic choice making. In order to uncover the cause of this lapse of information, the research turned to a study of Fiske Kimball's methodology as well as his extended influence in interpreting the historic record. It was determined that Kimball's approach was detached from its subject in ways that skewed the investigation of aesthetic choice making, leading to the idea that national temperament would be a determining factor. Kimball's framework implied two results 1) that Jefferson operated within an English heritage 2) that Jefferson used his time in France to validate his personal biases and preconceptions. Neither conclusion was capable of advancing our knowledge of Jefferson's aesthetic choice. Towards the end of this bracketed research, it was discovered that Kimball drew inferences based on documentary evidence, a procedure still used in the field of architectural preservation to corroborate, and not to supplant, other evidence.

It was necessary to re-contextualize Jefferson's architectural education. The research turned to a formulation of Jefferson's experiences concerning architecture, and

in order to do so, to assemble a sampling from Jefferson's himself. A perspective of the now long-standing scientific tradition asserts that the experiencing of architecture is subjective and therefore adds no value to our understanding. Importantly, this problem was already foreseen by the philosophy which emerged from enlightenment figures, including Jefferson himself. Questioning these figures directly concerning the challenges encountered by the newly formulated experimental philosophy (promoted by Voltaire a century later) offers alternative models through which to consider architectural theory. I chose purposive sampling, considered by Welman and Kruger (1999) as the most important kind of non-probability sampling, to identify the primary participants. I selected the sample based on my judgement and the purpose of the research. These subjects sought out the intangible sources which identify the causes of the physical world in which we dwell.

The sampling included those who offered context to the philosophical background, "the foundation of those superstructures which have been raised in the Physical and Moral sciences" as Jefferson stated (1789); those who established the architectural context which Jefferson experienced, and those who had participated in expanding the shifting paradigm under which the culture of light (See Chapter V) operated, as well as Jefferson's relationship to the "culture" that formed his aesthetic experience and Jefferson's attitudes towards aesthetic experience. All perspectives investigated maintain neutrality through a process called "horizontalization," that is all variations are considered as contributing to our understanding of the phenomena under investigation (Moustakas, 1994). Horizontalization ensured the etic nature of data

sampling. However, because the methodology of phenomenological investigation recognizes that one cannot be detached from presuppositions, the researcher should not pretend otherwise (Hammersley, 2000). Interpretations of phenomenological data, on the other hand, were inevitably emic in nature. Etic interpretation is made from outside the perspective of the phenomenon, while emic interpretation takes place from within the phenomenon. The data samples were considered saturated when no new perspective was offered on the topic.

Emic Investigation

Parallel to the collection of archival/documentary sources, the researcher was immersed in the relevant texts, sites, and realities of Poplar Forest in an attempt to enter into the source's life world, for as with Jefferson's architectural experiences—the interpreter experiencing the phenomenon is the Self.

This phase of the study included three major components. Firstly, a process of graphic and three-dimensional modeling of the geometry, proportions, and spatial configurations of Poplar Forest with the principle objective of photographing light variations on a scale model of the house. The decontextualized model opened a greater understanding of the geometry, orientation, and spatial relationships possible with Poplar Forest. A second phase included the Poplar Forest Field School, led by Travis McDonald in the Summer of 2017. The Field School opens a wider contextual lens that included the historic context of Poplar Forest, the preservation technologies leading to the reconstruction of the house, a broad survey of Jefferson's architectural output, including Monticello, the University of Virginia, Barboursville, Farmington, Montpelier, and other

environments. Jefferson's world, and the special problems of conservation, was discussed with museum curators, curators, archeologists, builders, and interpreters. The Field School offered a broad background against which to form an interpretation of Jefferson's imagination. The emic investigation culminated in the speculative interpretation of a "Philosopher's hut," along the lines of the primitive hut envisioned by Laugier described in Chapter V. The construction process was based on the process presented by Christopher Alexander's *Timeless Way of Building* (Alexander, 1979).

This multiphase intensive study introduced the researcher to the experiences of conceptualizing according to classical principles, communicating ideas concerning philosophical principles relevant to building, and pursuing the construction of a full-size pavilion oriented to a natural setting. In brief, to form an interiorized understanding of an analog to Poplar Forest in a condensed period of time according to the full cycle of Jefferson's creative process. The independent research forms an emic experience with the subject of investigation.

Textural/Structural/Essence Interpretation

To complement the historical background required for a through interpretation of Poplar Forest further required an extended period of immersion in classical literature, unfortunately in English, or French translations, rather than in the original Greek or Latin form that influenced Jefferson's own intellect. Similarly, it was necessary to survey the philosophers of the Age of Reason (Bacon, Descartes, Newton) whose work set the stage for the Enlightenment modes of thought of Jefferson's contemporaries (Locke, Voltaire, Rousseau, David Hume, et al.).

The reading of Classical literature was bracketed through French philosopher Luc Ferry, whose description of Western history, and knowledge of classical writings reveals the rise of themes concerned with Individuality, Morality (Common Good), of subjectivity and its counterpart objectivity. Critical reading of work by Ferry, and American linguist Steven Pinker rounded out the philosophical background of the enlightenment period, its current relevance, and allowed for the formation for significant clusters of meaning to arise from the collected data as stated in Chapter IV.

Similarly work by Classical architect Vitruvius, and Humanist architect Palladio formed the classical background against which Jefferson contemplated architecture. Questioning these classic works by Western architects was complemented by a later generation of architects from Bernini, Perronet, Gabriel, et al. whose work was instrumental (or in opposition to) establishing French architecture either for the glory of France, or later in the century for its value to enlightenment purposes. Jefferson's experience of French architecture would have been populated with an earlier generation of architects and architectural theorists and offered textural distinctions. Finally, attention was given to the circle of architects influenced by Jefferson himself, most of whom became the first generation of architects practicing on American soil.

It is principally the literature, which forms the extensive bibliography of this study, that went through the interpretative process of identification. While virtually non-exhaustive, the data opened the investigation to contextual circumstances. Often the association with a line or two from a letter warrants further investigation as to the context in order to obtain a response to "what is being experienced."

An analysis of historic context established verifiable locations, relationships, and provenance with respect to the materialist approach which was bracketed from the existing literature concerning Jefferson's architectural education. The materialist approach is essential to "get right" simply because our interpretation relies on the relationship between physical structure and cognitive image.

Explication: Phenomenological Interpretation

The creative interpretative act is primary (Giorgi et al. 1979, p. 180)

The interpretative process, which forms the body of text presented in "Chapter V-Explication of Intention" contains the textural, structural and essential interpretation. Understanding the formation of Jefferson's cognitive image of Poplar Forest requires us to put ourselves into Jefferson experience. Only then can we recognize Jefferson in own environment.

Because phenomenology is principally concerned with the lived experience, or inner world of the participants of a given experience, data collection is typically obtained through the interview process. However, in the context of historical environments we have "limited knowledge about behavior opportunities, the interaction of value systems, and the choices people make" (Lang, 1987). It is for this reason that the current study combined both interpretive (transcendental) phenomenology and descriptive phenomenology.

Technical details concerning material, or structural components were set aside to prioritize descriptions of the lived experience. For example, Jefferson's construction

notes were inclined to disengage emotive expression in favor of practical instruction; it was determined that such a position favors practical findings—one of the paradigms instilled in Jeffersonian scholarship in spite of proof that Jefferson’s conceptions are far from simple conveniences. This finding was witnessed by the debate between Jefferson and Latrobe on the subject, or the rebuilding of the skylight after a hail storm. Even the glass used at Poplar Forest proved to be impractical and guided the research towards an interpretation that sought to accommodate a theoretical, intellectual component in conjunction with the lived experience, the intersection which defines “dwelling” according to Norberg-Schultz.

Within the open process of phenomenology an interpretative analysis began at the point of data collection, as discussed above. Data, or significant statements, which had not previously been bracketed, were identified as significance in their capacity to inform the experience leading to a fuller understanding of Jefferson’s conceptual process.

Hermeneutic science, the art of reading a text (or building) so that the intention and meaning behind appearances are fully understood ... the interrelationship—the direct conscious description of experience and the underlying dynamics or structures that account for the experience—the interrelationship of science, art, and history is at the heart of hermeneutic design and methodology (Moustakas, 1994, p. 9).

Structural Description

Hermeneutic analysis was used to devise a correct understanding of text.

Interpretation is not an isolated activity; it is the basic structure of experience (Gadamer as quoted by Moustakis, p. 58). The reflective-interpretative process included not only a description of the experience as it appears in Jefferson's consciousness but uncovers the underlying historic and aesthetic conditions that account for the experience.

CHAPTER IV
EXPLICATION OF INTENTION

Man, therefore does not only dwell in urban spaces and buildings, but also in the language of architecture. It is in fact this dwelling which makes all others possible.

—*The Concept of Dwelling: On the way to figurative architecture* by Christian Norberg-Schulz

There is no description of Jefferson’s architectural accomplishments which does not include a quote by François-Jean de Chastellux; typically, the quote is rendered “... Mr. Jefferson is the first American who has consulted the fine arts to know how he should shelter himself from the weather.”^{47, 48} The letter from which the quote is extracted is part of a more extensive entry from the Chevalier Chastellux’ journals published as “Voyage dans la Haute Virginie” (Chastellux, *Voyages*, Paris, 1786, II, 1–156). Chastellux’ biographical sketch of Jefferson continues in such glowing terms that it is cause for Jefferson to respond that he “read with a continued blush from beginning to end, as it presented me a lively picture of what I wish to be but am not.”⁴⁹ Chastellux

⁴⁷ To Thomas Jefferson from Chastellux, 27 December [1784] As translated in the London, 1787, edition of “Voyage dans la Haute Virginie” (Chastellux, *Voyages*, Paris, 1786, II, 1–156) The Chevalier Chastellux held Seat 2 in the Académie française, the same lifetime seat filled by such notables as Alexander Dumas, and André Frossard, with whom the Author shared an acquaintance.

⁴⁸ Plainly an allusion to mid-eighteenth-century architectural philosopher Marc-Antoine Laugier. See subsequent section concerning the influence of Laugier in restoring foundational principles.

⁴⁹ From Thomas Jefferson to Chastellux, with Enclosure, 2 September 1785. Jefferson is responding to Chastellux’ description: “But it was a debt Nature owed to a philosopher and a man of taste, that in his own possessions he should find a spot, where he might best study and enjoy her ... it seemed as if from his

describes an evening in Jefferson's company from the perspective of a French

Academician:

I recollect with pleasure that as we were conversing one evening over a bowl of punch, after Mrs. Jefferson had retired⁵⁰, our conversation turned on the poems of *Ossian* ... In our enthusiasm the book was sent for, and placed near the bowl, where, by their mutual aid, the night far advanced imperceptibly upon us.

The mention of *Ossian* opens a door to understanding the arts which Jefferson consulted, and which he would continue to consult throughout his life. *The Poems of Ossian, the Son of Fingal* was published in 1765 as a translation of Gallic poems by James Macpherson (1736-1796); a hoax according to some, and one of the greatest poems ever written, hoax or not, according to others, including Jefferson and his guest.⁵¹ In his *Commonplace Book*⁵² Jefferson transcribed a single line from Ossian, who narrates the poem from the clouds: "He had seen her like a beam of light that meets the sons of the cave when they revisit the fields of the sun and bend their aching eyes" (*Fingal*, Book VI, p. 76-7 as quoted in Jefferson, Wilson, & Jefferson, 1989) This phrasing recalls

youth he had placed his mind, as he has done his house, on an elevated situation, from which he might contemplate the universe."

⁵⁰ Martha Skelton Jefferson died on September 6, 1782.

⁵¹ For further information concerning Jefferson and James McPherson see: Gilbert Chinard, "Jefferson and Ossian," *Modern Language Notes*, 38, No. 4 (The Johns Hopkins University Press, Apr. 1923). An impassioned correspondence exists between Charles McPherson, publisher, and Jefferson, in which McPherson writes: "Ossian himself, from his Cloud, might bend, and listen, with pleasure, to such praise. And the praise is due. For, if to melt, to transport the soul be an excellence, as sure it is, our venerable Bard possesses it in an eminent, a superlative degree." The publisher's letter to Jefferson exhibit the transformative influence of the sublime.

⁵² For further information concerning the commonplace book in Enlightenment intellectual thought see "Commonplace Books and Combinatorial Creativity", 2014

Plato's Allegory of the Cave from *The Republic*, in which "the sons of the cave" are prisoners who have escaped the shadow of ignorance which their senses tell them is reality, into the full truth of the sun. Ossian (McPhearson) however contrasts the sheltering truth of light with the strife that the hero Fingal has endured.

The "sons of the cave" is emblematic of the intent of Enlightenment philosophy, that is an end to ignorance, and oppression of the human spirit, reoriented and bound together by reason, science, humanism and progress (Pinker, 2018). These values are coexistent in the pure light of reason, much the way Newton's experimental philosophy of the previous century had revealed that pure light and a full spectrum of color formed a single, unique substance. Light, which penetrates the natural world, offers a consistent object of aesthetic investigation, unbounded by geographic constraints, consistent in its availability as a material; its form mutable to political, spiritual, technical and commercial concerns, giving light and the quality of vision the significance of Universal truth—*Hypotheses non fingo*.⁵³ The culture which formed around the profound truth of Universal light had a particularly profound influence on French architecture. Transcending symbolic language to form a cultural experience of form and order. The essays which follow are a non-exhaustive survey illustrating the substantive force which influenced the architectural culture in which Jefferson was an active participant.

⁵³ "I have not as yet been able to discover the reason for these properties of gravity from phenomena, and I do not feign hypotheses. For whatever is not deduced from the phenomena must be called a hypothesis; and hypotheses, whether metaphysical or physical, or based on occult qualities, or mechanical, have no place in experimental philosophy. In this philosophy particular propositions are inferred from the phenomena, and afterwards rendered general by induction." From Isaac Newton (1726). *Philosophiae Naturalis Principia Mathematica*, General Scholium. Third edition, page 943 of Volume I. Bernard Cohen and Anne Whitman's 1999 translation, University of California Press.

Part One: Philosophical Background [towards a Contextual Explication]

In Aristotelian logic, causality is the event which gives rise to a phenomenon. The agent of cause of every phenomenon may be explained by the material of its composition, by its form, by its creator, and by that for the sake of which the phenomenon was created (Aristotle, *Physics*, Book II, Part 3). In classical terms the “cause for the sake of which a phenomenon has been created” is referred to as its *telos*, or end purpose. The method of building of a house to provide shelter, according to a basic function of cause and effect is referred to as *techne* in Aristotelian logic. The distinction between *techne*, or the practical application to achieve an end goal, and *telos* is one of intent.

English philosopher Francis Bacon⁵⁴ (1561-1626) uses Aristotle’s terms but divides the causes of the “laws of nature” into two categories:

let the investigation of forms, which are (in the eye of reason at least, and in their essential law) eternal and immutable, constitute Metaphysics; and let the investigation of the efficient cause, and of matter, and of the latent process, and the latent configuration (all of which have reference to the common and ordinary course of nature, not to her eternal and fundamental laws) constitute Physics. And to these let there be subordinate two practical divisions: to Physics, Mechanics; to Metaphysics, what (in a purer sense of the word) I call Magic, on account of the broadness of the ways it moves in, and its greater command over nature. (Francis Bacon. *The New Organon*, Book II, Aphorism 9, 1620)

⁵⁴ “Bacon, Locke and Newton, ... I consider them as the three greatest men that have ever lived, without any exception, and as having laid the foundation of those superstructures which have been raised in the Physical & Moral sciences.” Thomas Jefferson to John Trumbull. Paris. February 15, 1789

By classifying the Aristotelian method into Physics and Metaphysics, Bacon separates the physical world from its “unseen causes.” Logically, *techne*, or functional purpose, dominates the investigation of physical, material reality. Teleology, which ultimately attributes purposeful action of mind to given phenomena, is largely abandoned in the pursuit of knowledge and practice (except for the influence of a cross-current of Neo-platonists thinkers).

The philosophical implications of Bacon’s dislocation of classical (Aristotelian) authority opens a class of scientific discovery, a pursuit which reveals an important transformation of the social order. Knowledge of the physical universe is obtainable through a well-ordered process of investigation open to any who care to delve into its “mysteries.”

In his turn, René Descartes (1596-1650) identifies a principle which proved instrumental in creating the modern notion of self. Descartes’ autobiographical treatise *Discourse on the Method* (1637), identified that *cogito, ergo sum*, translated in English as “I think, therefore I am.” The importance of this statement, in the age of doubt and skepticism, offered a basis upon which knowledge could be founded. In order for thought to exist, there must be a thinking entity, this entity is the self. Thoughts can be understood to exist, not because they are absolute forms, as Plato tells us, but because they are formed in cognitive awareness of the self.^{55 56}

⁵⁵ As banal as this may appear to the modern reader, we are reminded that Socrates, teacher to both Plato and Aristotle, was tried and convicted on charges of blasphemy and of corrupting the youth of Athens owing to the “voice” which Socrates heard. Socrates was guilty of having thoughts in his own mind and questioning the gods (exterior authority). In this we see Socrates prefigure Descartes’ realization that the Mind is not subordinated by body.

Twentieth century philosopher, Noam Chomsky in the podcast *Noam Chomsky on Descartes* summarizes the rationalization for Descartes newly formed principle: This collection of properties: of being unbounded, undetermined, uncaused—but appropriate to situations—[therefore] coherent—evoking thoughts in others—that’s a creative aspect of language use. Descartes could not accommodate this creative aspect within his mechanical principles, so he invented (described) a new class of cause—a standard force of science, if something isn’t explained within existing, or known principles, you construct a new principle—the new principle is what [Descartes] called the *mind*—alongside the body, which works by mechanical principles, here is another principle—a creative principle (Chomsky, 2017).

“At this point,” writes Husserl in *Cartesian Meditations*,

following Descartes, we make the great reversal that, if made in the right manner, leads to transcendental subjectivity: the turn to the ego cogito as the ultimate and apodictically certain basis for judgments, the basis on which any radical philosophy must be grounded (Husserl, 1999).

However, Descartes, having introduced the concept, does not pursue its logical course. It is Voltaire, and Voltaire’s generation, as we will see shortly, that seizes upon the full implication of Descartes philosophical invention.

⁵⁶ Husserl states: “France’s greatest thinker, René Descartes, gave transcendental phenomenology new impulses through his *Meditations*; their study acted quite directly on the transformation of an already developing phenomenology into a new kind of transcendental philosophy. Accordingly, one might almost call transcendental phenomenology a neo-Cartesianism, even though it is obliged—and precisely by its radical development of Cartesian motifs—to reject nearly all the well-known doctrinal content of the Cartesian philosophy.”

Sir Isaac Newton (1642-1727), building in part on Descartes skepticism, revolutionizes the investigation of natural phenomena while pursuing Physical and Metaphysical solutions in the investigations of Nature. The Enlightenment embraces Newton's scientific philosophy, which, to vastly oversimplify, asserts that the Universe consists of discrete particles (data) which collectively form a holistic system.⁵⁷ A system which renders natural phenomena impersonal, objectifies its constituent materials, and reunifies them into a mechanical process. The holism referred to however does not refer to the individual as the ultimate source of value, but rather to the system of hierarchy which organizes its constituent parts. Descartes' mechanical principle was overthrown by Newton; Again Chomsky: "[Newton] did not dispute the principle of mind—it was body which did not work by mechanical principles." For Newton the relationship between Mind and body seems a mystical force, yet a force active, and present.

In *An Essay Concerning Human Understanding* John Locke (1632-1704) establishes British empiricism by discrediting the concept of innate knowledge, arguing that knowledge is gained *a posteriori*, that is, only after experiencing can we truly know something:

Experience: In that, all our Knowledge is founded; and from that it ultimately derives itself. Our Observation employ'd either about external, sensible Objects; or about the internal Operations of our Minds, perceived and reflected on by ourselves, is that, which supplies our Understandings with all the material of thinking. These two are the Fountains of Knowledge, from whence all the Ideas we have, or can naturally have, do spring. (2.1.2, 104)

⁵⁷ That Isaac Newton's theories and thought came to light in the enlightened culture of France is due to Voltaire's 1738 publication of *Éléments de la philosophie de Newton* (English: Elements of the philosophy of Newton).

By the time of Jefferson's birth in 1743, the human imagination had transcended the barriers of classical hierarchies, what Jefferson referred to as superstitious belief. Over the course of Jefferson's lifetime, the human imagination, and its corresponding production were liberated from the rigid order of absolutism, and to a lesser extent from the hierarchy of aristocratic privilege, to assume a subjective human-centered view as a product of Enlightenment Philosophy. However, science, the mechanics of reality in Bacon's terms, has come to dominate the investigation of phenomenon, even while the forces which bind them have presently escaped. Jefferson, for his part, will activate a society of self-determination based on observations concerning the "natural order." The challenge to such an experiment, however, is in understanding the place of the individual within the social order once innate causes of classical hierarchy ceases to be the organizing force of society. Jefferson's participation in the enlightened, humanistic view of reality is evident in his letters, his writings, and his actions, just as the Enlightenment philosophy is evidenced in his architectural output, Poplar Forest among these.

Part Two: The Architectural Response to Enlightenment

The Académie royale d'architecture had been established by Louis XIV's Minister Jean-Baptiste Colbert (1619-1683) to:

define a global doctrine of great French architecture. Founded on rational principles which were to find their historical and theoretical guarantee in the works of Antiquity (in fact in the creations of the Roman empire, the only ones truly accessible at the time), this doctrine was to ensure a universal value for the monuments of Louis XIV's reign and place France where she deserved to be among European nations. (Gros, 2008)

In Colbert's view, Divine right is maintained by Absolutes; while creative liberties such as individuality are not to be indulged. Cracks in the Classical canon will begin to open as the eighteenth century progresses. The impetus for historical and theoretical guarantee will, however, exert its influence in the character of architecture through the next century; the century which culminates for our purposes with Thomas Jefferson's residence in the French capital.

From 1720, a component of the Académie was an annual competition, the Prix de Rome, which granted a multiyear scholarship to its recipients. Ostensibly, the Académie de France à Rome offered French students of architecture the opportunity to study firsthand the vestiges of Rome.

The study of Rome was, however, not confined to antiquity, and naturally included the dynamic experience of baroque Rome and its novel expressions. The unrest of the eighteenth century [was] visualized by Giovanni-Battista Piranesi (1720 – 1778) ... and tells the story of his time (Kaufmann, 1966, p. 105).

Piranesi's work was highly influential and came to impress itself upon generations of French artists and architects by way of the Académie, (particularly by way of Clérisseau to whom we will come shortly). In *Architecture in the Age of Reason*, Kaufman summarizes the architectural experience which made Piranesi such an inspiring force to the students of the classical who flocked to Rome:

Piranesi takes his stand on the side of straight lines against curves, for the sake of ‘truth.’⁵⁸ Deviating from straight lines and uprights seems to him the first sin; the mingling and intertwining of the single features, the second step on the road to depravity. Intent upon defending the Romans, Piranesi charges the Greeks with these evil inventions. He uses that bold and pretentious language which soon he was to impute to the Novice, the rigorist, and preaches restraint in decoration as it was practiced by the Etruscan and Doric builders. His idol is that nebulous ‘truth’ which he, like so many others believed to be attainable by copying nature⁵⁹ ... he recognized the specific beauty inherent in plain, utilitarian structures (Kaufmann, 1966, p. 108).⁶⁰

Piranesi’s influence is strongest in his graphic representations of architecture, for the graphic image can be transported and disseminated widely, where the sphere of influence of a single edifice must be experienced first-hand. Through his graphic work Piranesi disrupted the baroque system of hierarchy, the leading cause for the creation of the French *Académie*. Kaufman indirectly describes the nature of this disruption:

The vignette above the title of the *Parere [Observations on Architecture, 1765]* shows a building composed in an unusual manner. The single feature comes from classical stock, but they are unrelated and thus deviate from conventional arrangement. The whole is an agglomeration of almost independent elements ... the parts are disproportionate ... the upper part of the center has definitely outweighed the lower; the balance of the parts is disturbed. Though the center is still accentuated, there is no gradation leading from one part to the other; there is no final climax .. for all the elements ... do not conform to the upper central portion (Kaufmann, 1966, p. 109).

⁵⁸ Kaufman is quoting from *Della Magnificenza ed Architettura de’ Roma*.

⁵⁹ Kaufman’s phrasing “copying nature” extends beyond the physical manifestations of nature, for “the landscape where [man] lives is not a mere flux of phenomena, it has structure and embodies meaning. These structures and meanings have given rise to mythologies which form the basis of dwelling” (Norberg-Schulz, 1980).

⁶⁰ The same could be said of Jefferson’s disdain for Greek architecture and for unnecessary decoration, an opinion informed through Jefferson’s reading of Piranesi, through the influence of Clérisseau, or a combination of both influences.

Kaufman's investigation into Piranesi's invention is at a loss to explain why Piranesi offers his viewer such an architectural aberration. "How could Piranesi design this way while, in the very text of the *Parere* speaking of another building, he criticizes disproportion and discomposure" (Kaufmann, 1966, p. 109) ? The apparent paradox is resolved once we consider that Piranesi's design is intentional. That Piranesi is, in fact, describing the period in which he lived; for Piranesi was not to see the final climax of an unbalanced state of affairs, a state whose vertical hierarchy imposes a crushing downward weight on the lower supporting elements. In a literary sense Piranesi's imbalanced composition foretells the collapse of the "upper part of the center." The collapses of the upper mass, however, does not signal a collapse of the entire structure, it merely signals an opening into the interior spaces whose representation are the major contribution of Piranesi's body of work.

That the astute artist of his time could read such a meaning is unquestionable. Kaufman, too hints at his knowledge of such a reading, however Kaufman gives priority to architectural design: "I have the architectural design in mind, not the pictorial representations with the binding flood of light and shadow" (Kaufmann, 1966, p. 106).

Kaufman, too hints at his knowledge of such a reading, however Kaufman gives priority to architectural design: "I have the architectural design in mind, not the pictorial representations with the binding flood of light and shadow" (Kaufmann, 1966, p. 106). Piranesi makes no attempt to reconstruct ancient Rome to its perfect state, as Palladio might for example, instead describing the remains in their actual state for pictorial effect; this compositional strategy in representation known as the picturesque, contrasted with

the classical academic canon (which as it turned out, could not be relied upon as a consistent, immutable doctrine). Piranesi exploited the ruined state of repair to his advantage, achieving powerful light effects on volumetric spaces which the historical and theoretical sources of antiquity never guaranteed, but as he experienced their presence.

Aside from Piranesi's architectural engravings and astute observations of a particular timely vision of antiquity, all of which were known and referenced often by Jefferson, Piranesi's architectural vision found complicity with a Frenchman who would in turn come to have a direct impact on Jefferson. The impact on the creative imagination by way of the culture surrounding the Académie royale d'architecture, and in due course its significance is transmitted to Jefferson ... as Jefferson would later confide: "The moment a person forms a theory, his imagination sees in every object only the traits which favor that theory."⁶¹

⁶¹ The full quote from a letter from Jefferson to Charles Thomson, dated from Paris September 20, 1787 reads: "I wish that the persons who go thither would make very exact descriptions of what they see of that kind, without forming any theories. The moment a person forms a theory, his imagination sees in every object only the tracts which favor that theory. But it is too early to form theories on those antiquities. We must wait with patience till more facts are collected." Jefferson is clearly aligned with Newton's experimental philosophy, as indeed with the inductive process of phenomenological inquiry.



Figure 9. Ariadne, Giovanni Battista Piranesi. An example of the neoclassical intersection with chiaroscuro. Jefferson purchased a marble copy of the statue depicted and referred to in Piranesi's *Views of Rome* as precedent.

Charles-Louis Clérisseau (1721–1820) had been a student at the Académie in Rome but left the Académie following a dispute with the Director, Charles-Joseph Natoire (1700-1777). The exact cause of the dispute is unknown, but is believed to be based in Clérisseau's irreverence for the Académie's religious obligations (McCormick, 1990). The benefit of Clérisseau's expulsion placed him in Rome, where he remained for over a decade studying Roman architecture and producing architectural studies with Piranesi (McCormick, 1990). It was by way of Clérisseau that the Adams Brothers befriended Piranesi, with whom Clérisseau frequently collaborated. The similarities in the

use of light between the two artists is evident (Figure 11 & Figure 12). Clérissseau, like Piranesi, found much success in his architectural studies, particularly in his picturesque views of ruins, including a fresco for the Father le Sueur at the Convento di Minimi a Trinità de' Monti in Rome. Interesting, the light in Clérissseau's composition does not emanate from above, but rather from the surrounding natural landscape. Although Clérissseau's illusion depends on a strong knowledge of classical structure, it is his use of lateral use of light emphasizing the natural world beyond the ruined forms that is significant in the present study.

In the Classical model, form is created outside of human conception and exists in the realm of Absolutes as a type of cosmic goodness. Mankind, according to Plato, is born ignorant of such goodness and must learn to recognize the divine causes, aligning himself towards the goodness of the universe. The classical model of morality laid the foundation of mankind's original sin—we are fallen and imprisoned in shadow, maligned and ignorant of good. To an individual of the enlightenment, it is mankind who forms order within nature itself, and therefore it is mankind that is inherently good. The aesthetic in Clérissseau's composition is responding to the dismantling of the Platonic conception of ideal form, a form cracked open by its own weight to reveal the light of Nature in all its truth.

There is no suggestion here that Jefferson was influenced by Clerrisseau's fresco, there is however agreement between the symbolic meaning of Clerrisseau's fresco and Jefferson's opinion of the classical cosmology which Clerrisseau depicts in ruins. Just as

there is agreement with Piranesi's and the imbalance and crushing weight of the central mass.

While sojourning at Poplar Forest, Jefferson labored over Plato's *Republic*, having returned to Monticello, Jefferson wrote to John Adams mocking Plato's cosmological muddle:

his foggy mind is forever presenting the semblances of objects which, half seen thro' a mist, can be defined neither in form or dimension. yet this which should have consigned him to early oblivion really procured him immortality of fame & reverence. the Christian priesthood, finding the doctrines of Christ levelled to every understanding, and too plain to need explanation, saw, in the mysticisms of Plato, materials with which they might build up an artificial system which might, from its indistinctness, admit everlasting controversy, give employment for their order, and introduce it to profit, power & pre-eminence. the doctrines which flowed from the lips of Jesus himself are within the comprehension of a child; but thousands of volumes have not yet explained the Platonisms engrafted on them: and for this obvious reason that nonsense can never be explained ... our post-revolutionary youth are born under happier stars than you and I were. they acquire all learning in their mothers' womb and bring it into the world ready-made. the information of books is no longer necessary; and all knowledge which is not innate, is in contempt, or neglect at least. every folly must run it's round; and so, I suppose, must that of self-learning, & self-sufficiency; of rejecting the knowledge acquired in past ages, and starting on the new ground of intuition. when sobered by experience I hope our successors will turn their attention to the advantages of education (Jefferson, 1814).

Adams would surely recognize the enlightenment/revolutionary spirit of Jefferson's critique, as would Clérisseau. Piranesi might too have agreed were he able to see beyond the ensuing chaos of his own compositions. Jefferson and Adams waged war for the right to innate knowledge and for humanity to master its own destiny in concert with the harmony of nature. With Clérisseau, Jefferson would be seeking an architectural expression of a newly discovered liberty.

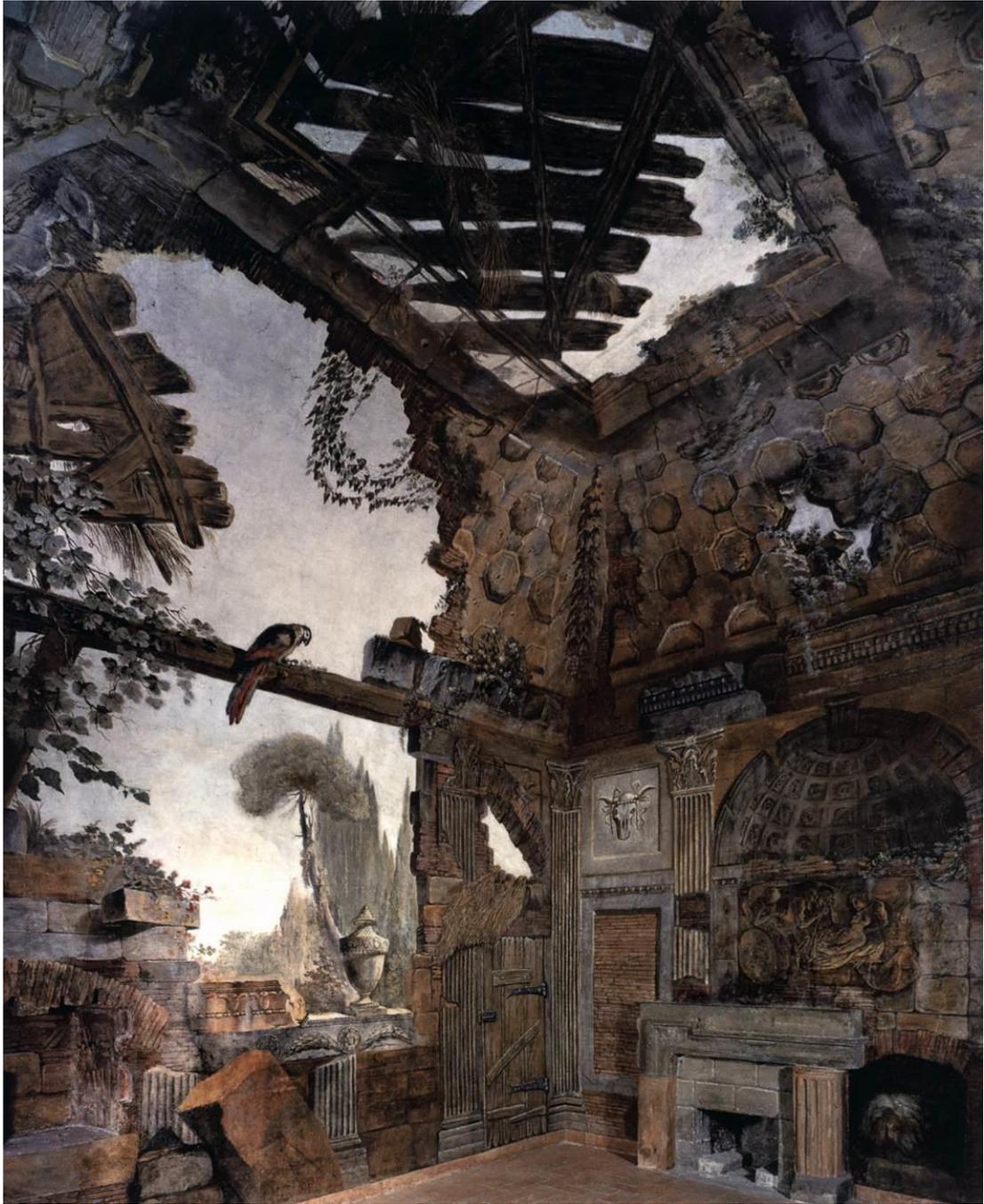


Figure 10. Ruins Room of Padre Le Sueur. Charles-Louis Clérisseau. (1765-66). Convento di Minimi a Trinità de' Monti, Rome.



Figure 11. Travelers in the Interior of the Temple of Diana at Baia. Charles-Louis Clérissseau, 1721-1820. Courtesy of the Morgan Library & Museum, New York, NY.



Figure 12. Interior; Piranesi, Piranesi in Rome.

Part Three: A Culture of Meaning [towards a Textural Explication]

As early as 1785 Jefferson had encountered Clérisseau's circle when he writes to urge American artist John Trumball (1756-1843) to visit the salon of that year. Jefferson offers his opinion to the younger artist, stating: "there are some good things, most notably David and Robert." Jefferson refers to Hubert Robert the artist, another recipient of the *Prix de Rome* famed for his paintings of Roman ruins in the style of Piranesi, and of his mentor Clérisseau. Robert, referred to by contemporaries as Robert des Ruines, presented several of his works to the salon of 1785 (Figure 13). The Musée Jacquemart-André, where the painting is now located, notes:

Only the break in the vault and the well of light it causes break from the genre. But all is explained, if we recall that this painting illustrates the possibility of overhead natural lighting for the grand gallery of the Louvre, which, at this the end of the eighteenth century, there was talk of turning into a museum. This painting is therefore not merely an architectural caprice.⁶²

The image of natural overhead lighting, and the surrounding polemic which Jefferson witnessed, reinforced Jefferson's predilection for natural overhead lighting through this painting initiated on behalf of a committee that included Hubert Robert, as well as architects Jean-François-Thérèse Chalgrin and Étienne-Louis Boullée to whom we will come shortly. The culture which Jefferson encountered, this culture of light, is hardly an isolated example, but it was certainly among the first. In spite of Leoni's best re-interpretation of Palladio, to whom, save the Pantheon, skylights are unknown, the effect of a skylight, was a revelation to Jefferson.

⁶² —Source: <http://musee-jacquemart-andre.com/en/collections/ruined-gallery>



Figure 13. Ruined Vault, Hubert Robert, 1785. “This painting illustrates the possibility of overhead natural lighting for the grand gallery of the Louvre, which, at this the end of the eighteenth century, there was talk of turning into a museum. This painting is therefore not merely an architectural caprice” (Musée Jacquemart-André, 2018).

In the autumn of 1786, having left his beloved friend, Maria Cosway at the Pavillon de St. Denis⁶³, Jefferson returns to his Parisian residence the Hôtel de Langeac where, as Jefferson says: “Seated by my fire side, solitary and sad” he writes a letter, now known as the “Head and Heart” letter to Maria Cosway. The letter takes the form of a dialogue between Jefferson’s Head and his Heart, here the Heart speaks of the first meeting with his beloved friend under the newly constructed dome of the Halle aux blés (Grain Market):

It was you, remember, and not I, who desired the meeting, at Legrand & Molinos.⁶⁴ I never trouble myself with domes nor arches. The Halle aux blés might have rotted down before I should have gone to see it. But you, forsooth, who are eternally getting us to sleep with your diagrams and crotchets, must go and examine this wonderful piece of architecture. And when you had seen it, oh! it was the most superb thing on earth! What you had seen there was worth all you had yet seen in Paris! I thought so too.⁶⁵ But I meant it of the lady and gentleman to whom we had been presented, and not of a parcel of sticks and chips put together in pens.⁶⁶

⁶³ The context suggests that what Jefferson refers to as the Pavillon de St. Denis is the toll house alternatively known as the *barrière de La Chapelle*, by architect Claude Nicolas Ledoux. An engraving of 1830 depicts the fire which destroyed the building where Mr and Mrs Cosway departed company with Jefferson, leaving him “more dead than alive”. A copy of the engraving is provided in the appendix as Item 3.

⁶⁴ Jefferson names the two architects responsible for the glazed dome construction: Legrand and Molinos. Jacques-Guillaume Legrand (1753-1807) was a student of Jefferson’s collaborator Clérisseau, whose daughter he married. Jefferson’s visit, with Mr and Mrs Cosway, to the Halles aux Bleds demonstrates his continued active participation in the circle of Clérisseau’s influence.

⁶⁵ The debate on intellectual beauty vs subjective, experienced beauty is in full play. Here, Jefferson’s heart speaks in superlatives concerning his beloved friends.

⁶⁶ Likely a reference to the construction method, which Jefferson adopts, or rather specifies that Latrobe adopt in the construction of the dome of the United States Capitol Building, the octagonal dome at Monticello, the Rotunda at the University of Virginia, and in principle at Poplar Forest.

In his investigation of the Hôtel de Langeac, twentieth century historian Howard Rice locates a period source, a guidebook which includes a brief description of Jefferson's Parisian residence:

l'hôtel de M. le comte de Langeac, bâti par M. Chalgrin, Architecte du Roi & premier Architecte de MONSIEUR. Cet hôtel, dans une heureuse situation, a ses vues & les jardins sur le grand Cours: on doit y remarquer la distribution des appartemens, & le plafond du salon peint par M. Barthelemi, Peintre du Roi, représentant le lever du soleil.⁶⁷

the house of M. le comte de Langeac, built by M. Chalgrin, Architect of the King & First Architect of MONSIEUR. This house, in its happy setting, with views and gardens on the Grand Cours [Champs-Elysees]: one should note the arrangement of its rooms and the ceiling of the Salon painted by M. Barthelemi [sic], the King's Painter, representing the sun rising.

It is this last description which offers information concerning Jefferson's relationship to a taste culture of light: "The ceiling of the salon painted by Monsieur Barthelemi, The King's Painter, represented the rising sun." As we see in Chalgrin's floorplan the room on the mansion's central axis is top-lit. Chalgrin, having attended to his studies in Rome, has not failed to absorb the architectural remedies of Piranesi and of Clérisseau, with their ruined vaults open to the natural light.

Although the house from which Jefferson wrote his letter was demolished in 1842, leaving no trace of its interior decoration, a sketch of the ceiling painting for the Hôtel de Langeac, titled *Dawn Rising* (Figure 14) by Jean-Simon Berthélémy still exists. The painting is currently in the permanent collection of the Musée des Beaux-Arts de

⁶⁷ Luc-Vincent Thiéry. *Guide des amateurs et des étrangers voyageurs à Paris: ou description raisonnée de cette ville, de sa banlieue, et de tout ce qu'elles contiennent de remarquable*. 1787. p.54.

Quimper.⁶⁸ It is likely that Jefferson wrote the following lines while seated beneath this very ceiling:

She wants only subjects worthy of immortality to render her pencil immortal.
How sublime to look down into the workhouse of nature, to see her clouds, hail, snow, rain, thunder, all fabricated at our feet! And the glorious sun when rising as if out of a distant water, just gilding the tops of the mountains, & giving life to all nature ... (Jefferson to Maria Cosway, October 12, 1786).



Figure 14. Lever du Soleil sur le char de l'Aurore, circa 1770. Jean-Simon Berthélémy. "Long attributed to Fragonard, this allegory of Morning is a study for the ceiling decoration of the oval Salon of the Hôtel de Langeac, constructed by Chalgrin in 1768 and destroyed in 1842. There is no extant evidence of the interior decoration. It is directly inspired by the décor of Charles de la Fosse for the Apollo Salon at Versailles (1681) by simplifying and reducing the number of figures. The Baroque strains in this study demonstrate the early stages of the artists career."⁶⁹ (Translated by the Author from Quimper, 2019). Reproduced with permission of the Musée des Beaux-Arts de Quimper.

⁶⁹ "Longtemps attribuée à Fragonard, cette allégorie du Matin serait une étude pour le décor de plafond du grand salon ovale de l'Hôtel de Langeac, construit par Chalgrin en 1768 et détruit en 1842. Il n'existe aucun témoignage de la décoration intérieure. Elle s'inspire directement du décor de Charles de la Fosse pour le salon d'Apollon à Versailles (1681) en la simplifiant et en réduisant le nombre de personnages. La veine encore très baroque de cette esquisse témoigne des débuts de la carrière de l'artiste." (Quimper, 2019)

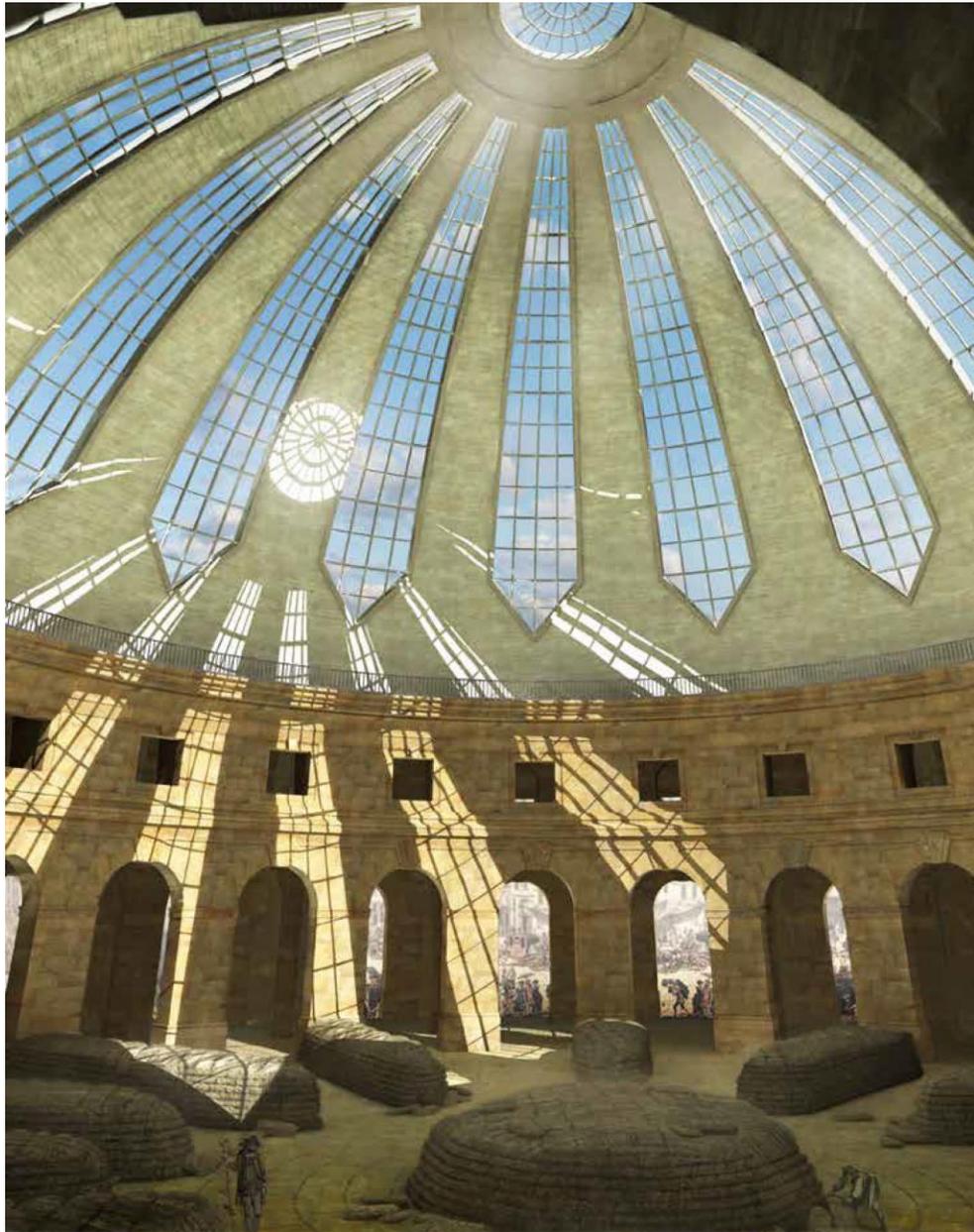


Figure 15. Domed Roof of the Halle Aux Blés, Nicolas Le Camus de Mézières, circa 1767. The neoclassical Grain Market was designed by Mézières, and the glazed dome was designed Guillaume Legrand and Jacques Molinos. Installation of the dome was completed in 1783, in the year before Jefferson arrived in Paris. A visit to this architectural marvel organized by American artist John Trumbull was the occasion at which Jefferson first met Mr & Mrs Cosway. Jefferson describes this first encounter in his famous “Head and Heart” letter written to Maria Cosway. Image © 2011 Richard Chenoweth and Reproduced with permission from the Artist.

Chalgrin, the architect of Jefferson's Parisian residence, had just completed another project which even now, is a brief stroll from the plaque on the Champs Elysees which marks the site of the Hôtel de Langeac. In the Église Saint-Philippe-du-Roule, Chalgrin transforms the basilica (the basilica is originally a secular Roman building adopted by the early Christian's due to its distance from the pagan temple) by flooding the interior with natural light. The tendency to revive historic types is but a prelude to the historicism of the nineteenth century. The revival of the Maison Carrée for the Virginia State Capitol in collaboration with Clérisseau, as well as the Pantheon adopted at the advice of Benjamin Latrobe, places Jefferson at the forefront of historicism in architectural design. In the closing decades of the century, even while access to Grecian forms is increasingly accessible, it is in the Roman style that Europe seeks its inspiration. Yet we see in this enlightened architectural culture that innovation arises from the actualization of observations based on the ruined state of antiquity. In revealing its structure, a ruin offers a vision of beauty, beauty whose interior space is bathed in light—there is no more plain expression of the enlightenment purpose.

The bridge from the doctrine of prescriptive, academic correctness to the extension of subjective experience was constructed in phases, each leading from shifts in philosophy, and Jefferson, in his French architectural education, is soon to break through his own reliance on architectural doctrine.⁷⁰ Palladio too, according to the best judges of

⁷⁰ Still another example of Clérisseau's influence on Jefferson is in the choice of capital used in the Ionic order for the Virginia State Capitol. Jefferson specified changing the Corinthian order of the Maison Carrée to the Ionic one account of the difficulty of carving a Corinthian order in Virginia. Clérisseau convinced Jefferson to use Scamozzi's version of the order, rather than Palladio, who had been Scamozzi's master. The essential difference between the two forms is in the volute. Palladio's version is planar and seen from one perspective, Scamozzi's version projects from each of the capitals four corners. Scamozzi's version has

architectural history within the *Academie*, was not exactly accurate in his calculations.

Jefferson will undergo yet another conversional experience in this regard.

Kimball tells us that the chronology of Jefferson's drawings has been determined by an analysis of the type of paper he sees in Jefferson's drawing; a change that occurred following Jefferson's encounters with Clérriseau: "Jefferson takes to drawing on a gridded French paper with a charcoal pencil" (Kimball, 1916. p. 46). Jefferson, on his return to America, forwards several precious sheets of the paper, together with a note.

I send for your acceptance some sheets of drawing-paper, which being laid off in squares representing feet or what you please, saves the necessity of using the rule and dividers in all rectangular draughts and those whose angles have their sines and cosines in the proportion of any integral numbers. Using a black lead pencil, the lines are very visible, and easily effaced with Indian rubber to be used for any other draught (Jefferson to David Rittenhouse, March 19, 1791).

An example of Jefferson's overcoming the constraints of rulers and dividers exists in his draft of the Virginia State Capitol. The drawing, which includes corrections in Clérriseau's hand, demonstrates the efficiency to which Jefferson has been introduced.⁷¹

This shift in Jefferson's conceptual approach is essential and requires further consideration.

the advantage of being legible as one moves around the portico, it is therefore spatial as opposed to pictorial.

⁷¹ That Jefferson retained a copy of this drawing unsettles the question of Jefferson's collaboration with Clérriseau. The original drafts of the Virginia State Capitol have been lost (possibly by Latrobe's hand), and except for a plaster model constructed under Clérriseau's supervision we do not see the full extent of Clérriseau's contribution to the design. Furthermore, the copy which Jefferson retained includes a notation in Clérriseau's hand correcting the proportions of the Ionic column of the south portico. By inference, it appears that Clérriseau is correcting the work of his pupil, Jefferson; however, there is no conclusive evidence either way. Jefferson credits Clérriseau with the introduction of Scamozzi's version of the Ionic order in preference to that of Palladio. As an architect schooled in the picturesque, Clérriseau surely prefers the qualities of Scamozzi's design as a response to orientation. The projecting portico, the first of its kind in America, and the first of its kind on a public building in Europe since antiquity, would be visible from multiple perspectives, not the flattened planar view which Palladio's order implied.

Prior to Jefferson's collaborations with Clérisseau on the Virginia State Capitol, we find several instances where Jefferson uses his rule and dividers, as well as a great deal of calculation to lay out the sides of an octagon (Figure 16). However, In the period at which Jefferson writes his famous "Head and Heart" letter to Maria Cosway, he has been occupied in his collaboration with Clérisseau on the Virginia State Capitol and references a practicing architect's ideation process on his newly acquired coordinate paper: "Fill paper as you please with triangles and squares: try how many ways you can hang and combine them together. I shall never envy nor controul [sic] your sublime delights" (Jefferson, 1786). Jefferson is no longer beholden to designing mathematically. The coordinate paper which Jefferson acquired holds within it the requisite geometric configurations, freeing Jefferson's conception to explore spatial combinations.⁷² Poplar Forest is conceived on such paper (Figure 1), and as the Coolidge Collection drafts of the house that would become Poplar Forest testify, Jefferson's process of drawing is identical to that which his heart describes as "triangles and squares: try how many ways you can hang and combine them together." In terms of forms, Jefferson is not following a canon, he is exploring his inner sense whereby the form is no longer guided by an exterior

⁷² See James Jerome Gibson on his theory of affordance, for example: "Building and architectural drawing are the result of affordances given by tools. The affordances of a tool become obvious in its use. An American psychologist of perception, James Jerome Gibson, defines affordances as the opportunities for action provided to the observers by the environment within which they operate. Furthermore, Gibson proposes that observers perceive the reality of these affordances rather than abstract physical properties of objects and environments. Affordances are real and have a relational ontology since they do not exist as a function of either environment or the observer alone, but exist in the interaction between the physical capabilities of the observer and the physical properties of the environment ... the relationship between the body, mind, and instruments is a dialectic one, and the reflexivity inherent in this relationship constitutes the very nature of the interaction with cognitive instruments." (Frasconi, 2011, p. 33)

mathematical principle, but rather is inherent to the form and the tools Jefferson uses in composition.

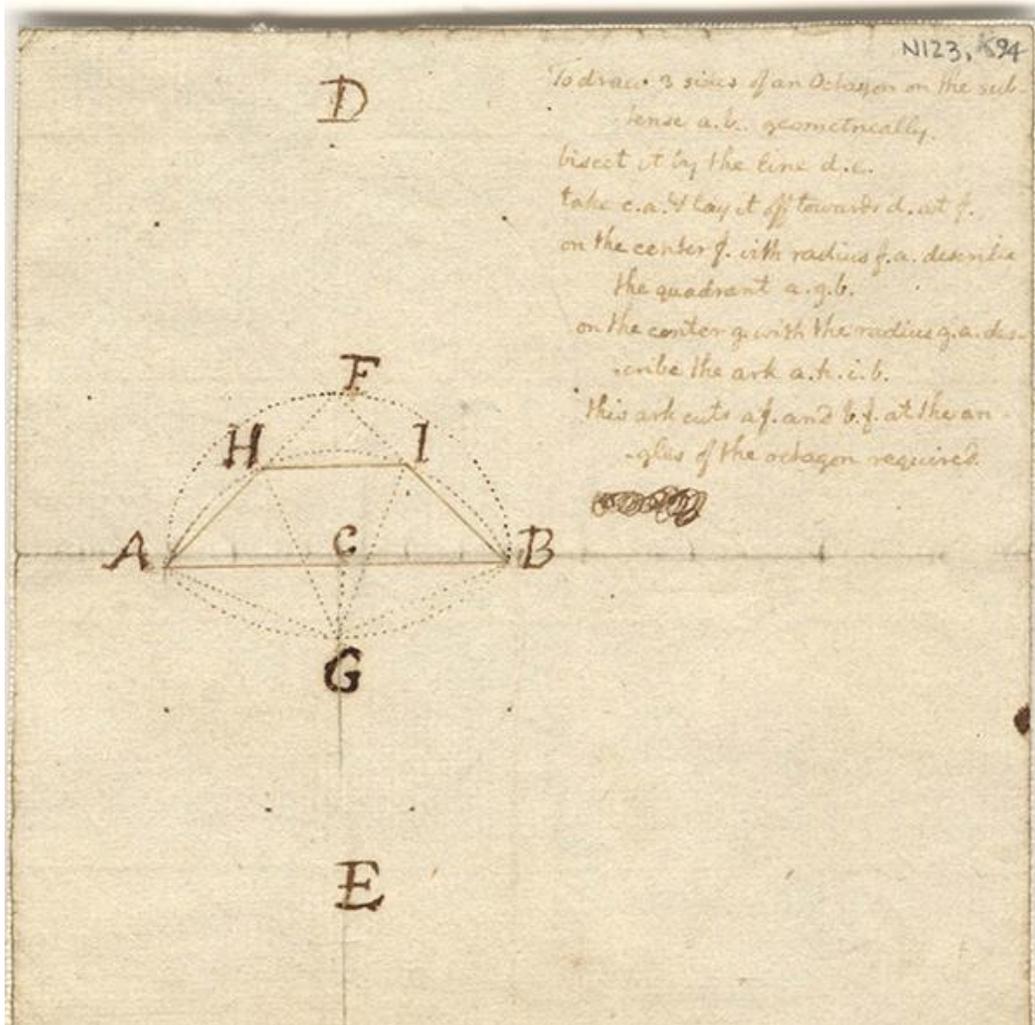


Figure 16. Theorem for Drawing Three Sides of an Octagon on a Given Base, with Diagram, Thomas Jefferson, circa 1771. This piece may have been part of the Monticello Building Notebook begun in 1770. Jefferson demonstrates his knowledge of mathematics and uses a “ruler and dividers” to plot out the geometry of an octagon. Following Jefferson’s encounter with Clérisseau, Jefferson begins to use gridded paper (and a pencil) to explore the potential of various floorplans for Poplar Forest. Original manuscript from the Coolidge Collection of Thomas Jefferson manuscripts. Massachusetts Historical Society.

It is also noteworthy that Jefferson invests his heart with this statement, and although it is apparent that the heart neither envies nor controls the iterative process, there is a recognition that the result achieves “sublime delights”. Either Jefferson’s aesthetic favors the rational of a transcendent, sublime character, or sublime is used in the sense of being extreme.⁷³ Still more intriguing is the juxtaposition of *sublime* and *delight*—it is tempting to imagine Jefferson and Clérisseau deliberating on the proper translation of Vitruvius’ Latin term *venustas*. However extensive Clérisseau’s influence on Jefferson may have been, it is certain that with his knowledge of the structure of government housed in the Virginia State Capitol, Jefferson was responsible for the interior divisions of the building. Unbeknownst to Kimball, the authentication of documents on French gridded paper allows us to locate Jefferson’s conceptualization of interior space.

Throughout the eighteenth-century experimental philosophy (initiated by Newton’s conception of gravity and space) creates its counterpart in the arts, including architecture. The major transformations which took place happened in interiors, for the transformations underway are transformations of the mind, the interior state. The relatively new idea of space is cause, earlier in the century, for Blondel (Director of the Académie royale de Architecture, and author of the multivolume *Lessons in Architecture*) to praise the state of French architecture and its innovations in *distribution*. The concept

⁷³ “Kant distinguishes two notions of the sublime: the mathematically sublime and the dynamically sublime. In the case of both notions, the experience of the sublime consists in a feeling of the superiority of our own power of reason, as a supersensible faculty, over nature (§28, 261).: (Ginsborg, 2014)

of spatial configuration had been prefigured nearly two hundred years prior, notably in the *hôtel* of Madame de Rambouillet who guided her architects to align doors with doors, and windows with windows creating the *enfilade*. The advantages of this idea of distribution is that it creates no obstacle to movement, just as Descartes had once aligned the inner world of mind and imagination. Spatial configurations, and ideas surrounding axis become a programmatic tool for French architects, as it was for Jefferson in defining the interior space of the Virginia capitol to reflect the new idea of division of power within government entities.

The innovations in decorative emphasis too had shifted. Just prior to Jefferson's encounter with it, Rococo had served the purpose of bursting through the imposition of the Classical hierarchy, erasing the line of wall, of column, of ceiling plane, the walls themselves had shifted. In correspondence, Reason was released from the notion of the doctrine of obedience; Newton discovered "gravity" and architectural design was now a composite of parts rotating in "space" bound only to a central core by centrifugal force.

The floorplan of the Petit Trianon, by the King's architect Ange-Jacques Gabriel (1698-1782) is a telling example of structuring a cosmological understanding in architectural design. Gravity structures movement around a vast sweeping staircase—the ultimate symbol of hierarchy⁷⁴ in French protocol—binding the reception rooms of the Petit Trianon in a spiral motion around its core. Divine Right is no longer represented in reference to Imperial Rome, or even in the allegorical motifs of Classical mythology. The

⁷⁴ Compare the staircase at the Petit Trinon, said to have been designed by Louis XV himself, with the staircase of Louis XV's mistress Madame du Barry at the *Pavillon de Louveciennes* by Ledoux designed in 1770. Ledoux has deemphasized the hierarchical nature of staircases but placing them out of public view. Jefferson too democratizes any hierarchical connotation by decentralizing stairways.

Petit Trianon, in its distribution of spaces, in its movement, gives form to the King's authority. In its original configuration, this movement terminated in the King's scientific *cabinet*, the room which would later become Marie Antoinette's boudoir with its vista overlooking the Temple de l'Amour set within a naturalistic garden.

This sensualist approach to design led the Classical purists of hierarchy, including Gabriel as the King's architect, to advocate for a reform in architectural practice by returning to foundational principles. Just as the enlightened thinkers of the previous century resolved the crisis of knowledge, so too did French architecture reassess the very nature of architecture itself—*cogito ergo sum*—beginning with the primitive hut as shelter (Figure 17). In his *Essai sur l'Architecture* (1753), the architectural culture critic the Abbé March-Antoine Laugier, writes an appeal for architectural practice to abandon the excesses of French Rococo, and to return to fundamental principles in architectural design. The frontispiece to Laugier's *Essai* captures the essential components of architectural composition such as Laugier envisions them. Venus meanwhile, indicates to an infant Eros the delights of returning to the earlier, more authentic form of shelter. The Petit Trianon, in its newly conceived consideration of neo-classical principles is the indirect response to Laugier's criticism.



Figure 17. The Primitive Hut. Engraving by Ch. Eisen. The image which served as the frontispiece for Laugier's *Essai sur l'Architecture*, advocates for a return to the essential character of architecture. The female figure is assumed to be Venus, reclining on the fragments of her achievement, she indicates her vision to the infant Cupid [Eros] the natural origins of her musing represented by the primitive hut. The Miriam and Ira D. Wallach Division of Art, Prints and Photographs: Art & Architecture Collection, The New York Public Library. (1755). *Essai sur l'architecture*. ... (Frontispiece) Retrieved from <http://digitalcollections.nypl.org/items/b2065a93-b245-8366-e040-e00a18066908>

The reform however, was not wholly a return to the previous century any more than a return to Cartesian method, nor was it a submission to the self-proclaimed triumph of British design following the Seven Years war, as British critics (and Fiske Kimball) contend.⁷⁵ In the period leading towards Jefferson's residence in France, tensions in French architecture (philosophy?) raged and came to define the world which Jefferson witnessed beginning in 1784.

The head of the Royal Academy of Architecture, Jacques-François Blondel (1705-1774), sought to instill an understanding of choreography of movement through space. Quite apart from the voluminous work on architecture which he had composed for the benefit of his students, we find a curious book, *La Petite Maison*, written anonymously by Blondel. The novella is a marriage of seduction and interior architecture. The reader witnesses the progressive seduction from garden to boudoir as told by the ever-increasing voluptuousness of rooms. The demonstration must have been effective,

⁷⁵ British historians have long contended that Gabriel based the King's residence at Petit Trianon (1762-1768) on a British pattern book authored by Robert Morris (1701-1754). French historians have maintained silence on the attribution of the most important house in the neoclassical style, until recently (See Fig. 1 and 2 in *Chalgrin et son temps: Architectes et Architectures de l'ancien régime à la Revolution*). Gabriel, as a judge for the Grand Prix de l' Académie royale d'architecture, awarded Chalgrin's design for a neoclassical pavilion on a river bank. The design became the basis for Gabriel's composition of the Petit Trianon. The interest of the design, aside from the simplicity of its neoclassical façade, is in the variety of relationships applied to both river front and garden front. A scheme which Gabriel put to good use in each of the Petit Trianon's four facades, connecting the character of spatial relationships and the intimate scale of the house with its surrounding gardens. The Petit Trianon is developed not according to a single grand vista, or even two; but is instead autonomous, centered in the Newtonian space generated by a core around which the ideally proportioned rooms and subsequently the exterior facades, rotate. This movement is evidenced by the floorplan itself. The construction of the Petit Trianon is further relevant in its distance from court protocol, which allowed Louis XV the pursuits of a private citizen, while of course, maintaining the privileges of his position, notably in the central staircase. Of the gardens surrounding Petit Trianon, reference is made to Marie Antoinette's domain the *Petit Hameau*, a rustic farmland, as a response to Rousseau's natural state. We will never know what effect the naturalistic (albeit contrived) environment may have had on the Dauphin who was raised in large part in the Queen's domain; Jefferson on the other hand is fully aware of Rousseau's truth concerning natural order. Virginia Tulip Poplars, the species from which Poplar Forest takes its name, line the *allée* leading to the forecourt of Petit Trianon. The trees were gifted by the newly formed United States.

for the French acquired an acute understanding of the correspondence, or sequencing of rooms along requisite social needs.

The year that Jefferson arrived in Paris (1784), the architect Nicolas Le Camus de Mézières (Principal Architect for the Halles aux Blés which we have already discussed) published *The Genius of Architecture; or, the Analogy of that art with our sensations*. The thrust of Mezières' thesis seeks to accommodate the modern concept of the subjective experience of spatial configurations using movement, scale and *destination* to determine the use of rooms. The enfilade is no longer a processional of courtly protocol. Privacy and intimacy are valued as reflected by the gradation of scale in rooms. No longer is Versailles, with its succession of symbolic spaces, the ultimate model of glorification of the State, all the permutations of French architecture, the historical and theoretical guarantee for which the *Académie* had been established, finally succeeded in sacralizing the subjective. No longer is the palace, and shortly hereafter the church, the dominant form of power; it is the temple which shelters the new individuality.

Not all journeys through space are seductive, or necessarily functional. Beauty may also extract a transcendent quality: "There is such beautiful order in the physical world, and so much disorder in the moral world, that there must be another world where soul shall be satisfied" (Bernardin de Saint-Pierre, 1786).

In April of 1774, Jean-Jacques Rousseau⁷⁶ and Bernardin de Saint-Pierre (1737-1814), botanist and author, walked to Mont Valérien, to the west of Paris. In his *Essai sur*

⁷⁶ "Madame de Houdetot, the 'Sophie' of Rousseau's *Confessions* ... specialized in Americans. Jefferson inherited her friendship from his predecessor [Benjamin Franklin], made dutiful calls at the Saint-Honoré *hôtel* and at her country place in Sannois." (Rice, 1976) Sophie is the ideal, natural woman to the ideal,

J.-J. Rousseau, Saint-Pierre narrates the conversation which transpired with Rousseau as they walk, botanizing, and which culminates in Rousseau's reflection which bound the two authors:

We walked for some time in the cloisters and gardens. One enjoyed from there an immense landscape. Paris raised in the distance its towers, covered with light, and appeared to crown that vast picture⁷⁷ ... as we walked silently, contemplating the landscape, Rousseau said to me, "I will return to this place to meditate again."

Jefferson too, visited Mont Valérien as his daughter Martha tells us: "Whenever he was in a press of business, he had the habit of taking his papers and going to the hermitage, where he spent sometimes a week or more till he had finished his work." Martha's practical explanation is preceded by a description of the character of Mont Valérien, a description that she would have had from her father:

He also had rooms in the Carthusian Monastery on Mount Calvary; the boarders, of whom I think there were forty, carried their own servants, and took their breakfasts in their own rooms. They assembled to dinner only. They had the privilege of walking in the gardens, but as it was a hermitage, it was against the rules of the house for any voices to be heard outside of their own rooms, hence the most profound silence (Martha Jefferson Randolph).

Jefferson's need for retreat, or meditation in Rousseau's sense, is leading society to "the temple in the garden [as] an individual asylum ..." (Vidler, 1987). Saint-Pierre's reflection on beauty, and of "another world where soul shall be satisfied," and Jefferson's sense of "profound silence" offer a different character of space to which an individual

natural man, Emile in Rousseau's *Confessions*, which deals principally with how natural man might live within society. Jefferson and Rousseau share a disdain for the corruptibility of urban life.

⁷⁷ Boullée is equally intrigued by the potential of immensity, to sublimate the mundane, and through architecture transport the viewer with the sublime.

may turn for introspection. : According to Anthony Vidler (*The Writing of the Walls*, 1987, p.3) “The reexamination of the social practice of architecture was supported by the tendency of philosophic thought.” Vidler’s explains the origin, and influence of Rousseau on this tendency:

to return all subjects to their ‘natural’ and therefore principled ‘origins’. By this was meant the institution of single causes and their rational consequences, according to a coherent model, rather like that provided by Newton for the physical sciences (Vidler, 1987).

Self-reflection is the sacred work required of selfhood.

Notes on the Sublime: Beyond all Sensible Measure

It is Boullée who, while honoring the academic tradition of the preceding century, directs the Académie towards a radical new expression of forms which have emerged from that tradition. Jefferson’s friend (and fellow horticulturalist) Madame de Tesse was intimately acquainted with the architect’s work. Madame de Tessé (General Lafayette’s Aunt by marriage) was well known to the American contingent, and universally known for her exquisite gardens at Chaville, for which Boullée had provided the design. It is apparent from the teasing in Jefferson’s letter that he shares an affection for the charms of Chaville:

Loving, as you do Madam, the precious remains of antiquity, loving architecture, gardening, a warm sun, and a clear sky, I wonder you have never thought of moving Chaville to Nismes. This is not so impracticable as you may think. The next time a Surintendant des batiments du roi, after the example of M. Colbert, sends persons to Nismes to move the Maison [Car]rée to Paris, that they may not come empty-handed, desire them to bring Chaville with them to replace it. (Jefferson, 1787)

In the twentieth century, it is Kaufmann who is the first to detect this outpouring of architectural feeling which Jefferson expresses. In *Three Revolutionary Architects* (1954) Kaufmann explains: “To be inspired is to be moved with such overpowering feeling for the object which engages our mind so that it seems about to burst...”

Imbued as [Boullée] was with the ideas of the sensualist philosophers, architecture is one of the elements in the human environment which shapes the individual, and so it too may contribute to the building and improving of society.

For the humanist architects of late eighteenth century France, progress was the order of the day, and Jefferson, ever the keen observer, has this horizon in his mind’s eye.

At the Place de Louis XV (on the site currently occupied by the United States Embassy) a ten-minute walk at Jefferson’s stride, stood another temple of Boullée’s design. French historian Pérouse de Montclos describes the house that Jefferson would have past daily on his promenade:

Without doubt, the sacralization of the private dwelling, of which the Hotel de Brunoy gives the most accomplished example, proceeds directly from Palladio. But the success here is in the fact that Boullée knows how to be Palladian and French in equal measure. In effect, this single-story temple with its portico is crowned as the mausoleum of Halicarnasse, constructed on the plan of a *hôtel entre cour et jardin*. This temple is a double-headed Janus. On the side of the rue St-Honoré, it has the appearance of a French mansion, an exemplary mansion in that its entrance courtyard reinforces the tranquility of its site as recommended in all the treatises on the subject. On the other face, the garden, which is traditionally the most remote of places, its most intimate hollow, opens on the promenade of the Champs-Elysees from whence one sees the temple façade ... one has willingly sacrificed intimacy for the fashion of giving houses the appearance of public buildings.⁷⁸ (Pérouse de Montclos, 2013)

⁷⁸ Translated from the original French by the Author: “Nul doute que la sacralisation de la demeure, dont l’hôtel de Brunoy donne l’exemple le plus accompli, procède au moins indirectement de Palladio. Mais la réussite tient ici au fait que Boullée a su être également palladien et français. En effet, ce grand temple à



Figure 18. L'hôtel de Brunoy. View from the Champs-Élysées. Drawing by Jean-Baptiste Lallemand (circa 1780) Constructed by Etienne-Louis Boullée. The effect of Boullée's composition is heightened by its public presence, as well as the creation of volume by extending the architecture of the house into the landscape, the open volume becomes a public room. The wild abandon of the trees which dominate Lallemand's depiction reinforce the effect. Jefferson, on his promenade to the Tuileries from the Hotel Langeac, would experience the same public spectacle as the *flâneurs*⁷⁹ depicted. Such pavilions, or temples, were a feature of the landscape in and around Paris.

portique, sans étage, couronné comme le mausolée d'Halicarnasse, est construit sur le plan de l'hôtel entre cour et jardin. Ce temple est un Janus bifront. Du côté de la rue Saint-Honoré, il a l'apparence de l'hôtel français, et même d'un hôtel exemplaire puisqu'il est en cœur d'îlot pour renforcer la tranquillité du lieu comme le recommandent les traités. En revanche, le jardin, qui est traditionnellement le fond du gîte, son creux le plus intime, est ici ouvert sur la promenade des Champs-Élysées d'où l'on voit le frontispice du temple. Cependant la nouveauté de ce tableau est relative. L'hôtel à logis sur les quais, pour jouir de la vue du fleuve, s'est développé à Paris au XVII^e siècle. Au XVIII^e siècle, les logis sont sur les boulevards pour profiter de la verdure des promenades; on y sacrifie d'autant plus volontiers l'intimité que la mode est de donner aux maisons l'apparence d'édifices publics."

⁷⁹ Although the *flâneurs*, as a literary type, was characterized later in the nineteenth century, the acute observation of architecture and society which Boullée intended and which Lallemand's drawing depicts, qualify Jefferson into its ranks. While the term may be anachronistic, the action itself is clearly not.

It is Montclos' commentary on appearance which distinguishes architectural instruction in this age. As Boullée writes: "I have made it a rule that I shall work for the benefit of society and thus merit public esteem." The visibility of the Hotel de Brunoy is precisely Boullée's purpose, he considers architecture to be of public good. He further describes this objective:

I should confess straight away that I have refused to confine myself to the exclusive study of our ancient masters and instead have tried, through the study of Nature to broaden my ideas on my profession which, after much thought, I consider to be still in its infancy. (Boullée, n.d.)

Boullée passionately describes his intentions in architecture, as a poetry whose purpose is to arouse sensations corresponding to the function of the building; in studying the "theory of volumes" and the power which they hold over sensation, Boullée hoped to establish principles that "would be all the more certain for having their sources in nature."

Surrender yourselves completely to all the pleasure that this sublime passion can procure! No other pleasure is so pure. It is this passion that makes us love to study, that transforms our pain into pleasure and, with its divine flame, forces genius to yield up its oracles ... we must not presume that all we have left is to imitate the ancients! (Boullée, n.d.)



Figure 19. Pavillon de Musique de Madame à Versailles. Constructed 1784. Chalgrin. The pavilion shares characteristics with Ledoux's famous pavilion for Madame du Barry of the previous decade; notably the recessed portico and a clearly articulated geometry. While Ledoux's rectilinear pavilion is oriented towards the Seine, and Boullée's Hôtel de Brunoy faces the Champs-Élysées, Chardin's octagonal composition forms the center piece of a naturalistic garden. With exception to the coat of arms in the gable, the unadorned, stark geometry of the structure allows each element of the composition a clear articulation, while the simplicity of surface ornamentation heightens the effect of light and shadow. Jefferson would also adopt the recessed portico as public shelter, most notably at Monticello. The temple pavilion, in all its aspects, shares a great affinity with Poplar Forest.

Jefferson has his own passion for architecture, and should the Maison Carrée, that perfect morsel of antiquity, somehow be replaced by Chaville, Jefferson leaves a testament to Madame de Tessé:

Here I am, Madam, gazing whole hours at the Maison quarrée, like a lover at his mistress. The stocking—weavers and silk spinners around it consider me as an hypochondriac Englishman, about to write with a pistol the last chapter of his history.⁸⁰

For the eighteenth-century observer of French architecture, and we may safely place Jefferson in this culture,⁸¹ these passions for the classical carry meaning. Take for example Antoine Court de Gébelin, a Protestant Abbe:

I see allegory shining on all sides, giving the tone to the whole of antiquity, creating its fables, presiding over its symbols, animating its mythology, mingling with history, incorporating itself in the most august truths, becoming the vehicle for human knowledge, furnishing it an indispensable support.

It is in the revolutionary architects, however, in their passionate appeals to human sentiment, to elevate humanity and the human condition, to console the human soul with a profundity in architecture, that shaped the architectural praxis during the time that Jefferson witnessed this desire for flourishing.

Umberto Eco (*History of Beauty*, 2010) addresses (via Kant) Enlightenment philosophy with its accompanying themes of reason and nature:

⁸⁰ An obvious reference to the Sturm und Drang novel *The Sorrows of Young Werther*, by Johann Wolfgang von Goethe (1749-1832). Sturm und Drang was a German literary movement in which extreme emotions are given expression as a reaction to the constraints of Rationalism. Jefferson teases his correspondent with the idea that his passion for the Classical masterpiece is unrequited. Goethe ultimately distanced himself from the work which made him famous, but somewhat too late to contain the cultural energy which the book unleashed.

⁸¹ “Were I to proceed to tell you how much I enjoy their architecture, sculpture, painting, music, I should want words. It is in these arts they shine.” (Jefferson, 1785)

Kant had to recognize in the Sublime the power of formless and unlimited Nature: the steep, majestic cliffs, storm clouds, volcanoes, hurricanes, the ocean, and every other phenomenon that manifest the idea of the infinity of Nature. In Kant there is still at work the unsubstantiated faith in the positivity of Nature, in its ends and in its harmonies. This aesthetic ‘theodicy,’ typical of the century ... the existence in nature of evil and ugliness does not contradict the positive and substantially good order of creation ... in fact, for Kant, the rational upshot of the experience of the Sublime was the recognition of the independence of human reason from Nature, thanks to the discovery of the existence of a faculty of the spirit capable of going beyond all sensible measure (Eco & McEwen, 2010).

He Had Seen Her Like a Beam of Light: A Culture of Light

Japanese artist Hiroshi Sugimoto⁸² was granted entry to the Pantheon at nighttime to photograph the interior of the Pantheon by moonlight (Figure 20). The image depicts conditions that are outside the normative experience of this iconic interior, eliciting the viewer to question meaning:

If we encounter the limits of human feeling and perception that ... Sugimoto’s photographs represent. We then recognize the condition that already constitutes our living: a sympathetic ‘continuity of mind,’ a form of love. All humans have it. We all experience it. Immersed in an artist’s sea of life—this aesthetic entry into nature, history, and other beings—we become aware of our conscious awareness.⁸³

Sugimoto’s representation deemphasizes structure as well as the history of the Pantheon, to force our attention to confront our conscious awareness of the phenomenon of light.

⁸² Sugimoto is also an accomplished autodidact architect, founding the architectural firm, New Material Research Laboratory (NMRL) in 2008 with the stated philosophy of “working on bold architectural designs that incorporate traditional materials, eschewing current architectural trends.” See: <http://www.shinsozai.com/#philosophy>

⁸³ <https://fraenkelgallery.com/publications/rothko-sugimoto>

Through Sugimoto's photograph we encounter the substance of light rather than the structural, material apparatus which forms the effect of light.

Jefferson's sense of historicism⁸⁴, much like Sugimoto after him, decontextualizes the *genius loci* and innovates a new context through which to experience light. The spiritual symbolism of the Pantheon's oculus, and its unified, substantive effect transferred to a modern context identifies Jefferson as a member of a particular neoclassical Enlightenment taste culture fully intent on elevating subjective experience and human reason to the level of absolute reality. Jefferson's meaning, however, does not leap from the Pantheon, or indeed from Leoni's representation of the Pantheon via Palladio, to Poplar Forest before the intermediate influence of the culture in which Jefferson is participating.

A gradual shift in the use of light, and of light's representation, allow us to track the transfer of meaning. The humanist shift in the meaning of light is evident in *The Ecstasy of St. Teresa* (Figure 21) by Gian Lorenzo Bernini for the Cornaro Chapel in Santa Maria della Vittoria, Rome. In an essay published by the Khan Institute, Dr. Beth Harris and Dr. Steven Zucker remind us that Federico Cornaro, Cardinal of Venice, and the patron of the Cornaro Chapel, is depicted as a witness to the scene of St. Teresa's ecstasy. The essay describes the means by which Bernini's reference to his patron breaks "down the barrier between the work and the viewer—to involve us." The theatrical

⁸⁴ Jefferson was not alone in adopting the Pantheon as precedent, although arguably he is among the first to adopt its form, together with its panthodic meaning, as the centerpiece for an institution of knowledge at the University of Virginia.

nature of the chapel is expressive of the intent of Baroque design, that of including the viewer. Historian Wittkower notes that:

In spite of the pictorial character of the design as a whole, Bernini differentiated between various degrees of reality, the members of the Cornaro Chapel seem to be alive like ourselves. They belong to our space and our world. The supernatural event of Teresa's vision is raised to a sphere of its own, removed from that of the beholder mainly by virtue of the isolating canopy and the heavenly light. (Wittkower, Connors, & Montagu, 1999)

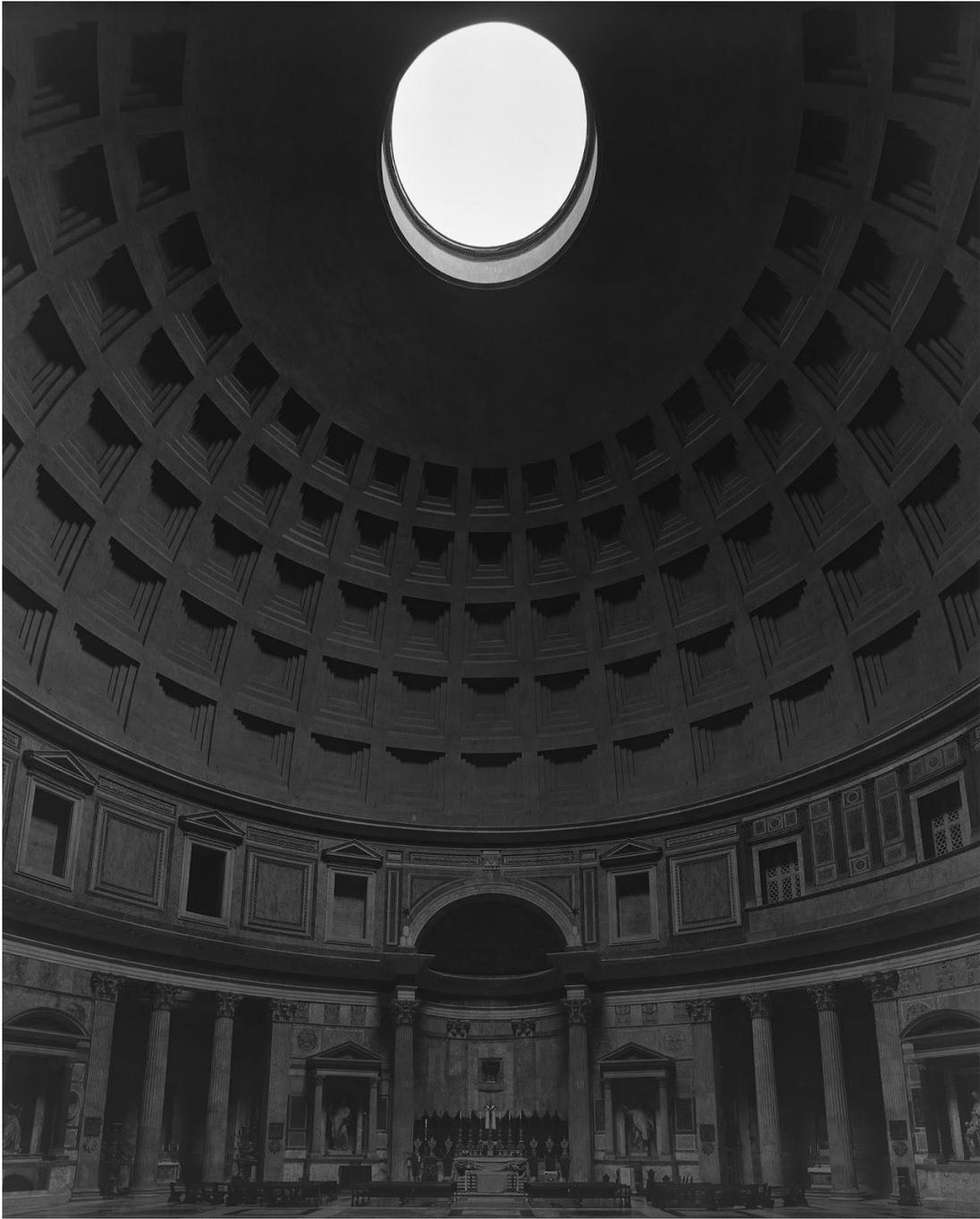


Figure 20. Pantheon, Rome, Hiroshi Sugimoto, 2015.

In our experience of Bernini's sculptural composition, the relationship of light and shadow appear to create not a detached planar mass, as Wittkower suggests, so much as living flesh (Figure 22). Against the contours of the sculptural group is our visceral experience of light; light as an active force interacting with the material realm. St. Teresa tells us as much:

Beside me, on the left, appeared an angel in bodily form ... He was not tall but short, and very beautiful⁸⁵; and his face was so aflame that he appeared to be one of the highest rank of angels, who seem to be all on fire.... In his hands I saw a great golden spear, and at the iron tip there appeared to be a point of fire. This he plunged into my heart several times so that it penetrated to my entrails. When he pulled it out I felt that he took them with it and left me utterly consumed by the great love of God. The pain was so severe that it made me utter several moans. The sweetness caused by this intense pain is so extreme that one cannot possibly wish it to cease, nor is one's soul content with anything but God. This is not a physical but a spiritual pain, though the body has some share in it—even a considerable share.

⁸⁵ Bernini represents this "angel" as Eros, the classical trope for the interpenetration of the soul with love as described in the mythology of Psyche and Cupid.



Figure 21. Ecstasy of Saint Teresa, 1647-1652.

Bernini is not seeking a pictorial effect as Wittkower contends, he is after a spatial profundity. The viewers gaze is turned up to the sculptural group towards the source of penetration, the eye continues ascending towards the source of divine light. Light, the source of St Teresa's exquisite agony is substantive light piercing human flesh. As Norberg Schultz explains:

Light has of course always been experienced as a basic part of reality, but ancient man concentrated his attention on the sun as a 'thing', rather than the more general concept of 'light'. In Greek civilization, however, light was understood as a symbol of knowledge, artistic as well as intellectual, and was connected with Apollo, who absorbed the old sun-god Helios. In Christianity light became a symbol of conjunction and unity which was connected with the concept of love. God was considered *pater luminis*, and 'Divine Light' a manifestation of the spirit (Norberg-Schulz, 1980, pp. 31-32).

In Bernini, we witness not so much a picture of the divine, but rather the elevation of the sublime experience of light penetrating our own flesh within the human realm.



Figure 22. Detail View, Ecstasy of Saint Teresa, 1647-1650.

Bernini's use of light, as it represents St Teresa's bodily ecstasy, is contemporaneous with the development of the Cartesian laws of nature, as independent from Divine action. René Descartes (1596–1650) hypothesized in his first law that: "Each thing, in so far as it is simple and undivided, always remains in the same states, as

far as it can, and never changes except as a result of external causes.” The implication to philosophers being that an external object is responsible for any change in physical states. Newton’s experiments, in the second half of the seventeenth century indicated otherwise, that objects “unless compelled to change that state by forces impressed upon it,” the implication being that natural objects are influenced by forces coexistent with nature itself. Newton’s critics, Leibnitz for example, argued that Newton’s forces, because they are not physical substances were metaphysical.

By 1738, five years before Jefferson’s birth, Voltaire had rejected the Cartesian view, and altered the discourse in French philosophy to include Newton’s forces, not as metaphysical causes, but as a component of the natural order, as Newton intended. Light, Bernini’s representation included, has been transformed from Divine presence to a force of nature within the human realm.

Ledoux’s engraving *l’Abri du pauvre* (Figure 23) is an appropriate image to illustrate the shift in meaning of light. As Norberg-Schultz tells us in *Genius Loci*:

The sky is something ‘high’ and inaccessible. Its shape is described by the ‘vaulting path of the sun’, and its properties in general are experienced as transcendence, order and creative power. The sky primarily has ‘cosmic’ implications, whereas the earth may satisfy man’s need for protection and intimacy. At the same time, however, the earth constitutes the extended ground on which his actions take place (Norberg-Schulz, 1980).

In Ledoux’ representation, beams of light do not pierce flesh, rather they pour out nature’s bounty upon the earth, and offer themselves to human will to be “proportioned” as Ledoux says of Nature. In his 1804 publication, Ledoux expresses this same humanist intent in a caption to his engraving:

L'homme tel qu'il soit, n'occupe qu'un petit espace; il a beau être grand, il ne remplit pas à la fois le vide immense de l'univers. Dans quelques situation qu'il soit, ce n'est pas à lui de rivaliser avec la nature, c'est à l'art de soumettre ses besoins à ses possibilités; c'est à l'art de les soumettre à la proportion; c'est un bien-fait qu'il rend commun à tous. (C. N. (1736-1806) A. du texte Ledoux, 1804)

Man, such as he is, occupies only a small space; it may be great though that he does not fill the immense emptiness of the universe, for whatever his condition may be, he does not rival nature; it is in the art of submitting his needs to its possibilities; it is in the art of submitting them to proportion, this is the benefit that man renders in all things.



Figure 23. L'abri du Pauvre (Shelter of the Poor). From *L'architecture considérée sous le rapport de l'art, des moeurs et de la législation*, Claude-Nicolas Ledoux, 1804. Paris

Ledoux' *L'abri du pauvre* is the reality of the (pre-architectural) human condition. We dwell within Nature, within the space between earth, sky, and water. Light, in the enlightened mind, is that creative power which makes of humankind a transcendent being.

Part Four: Between Earth & Sky: Jefferson's Intentions in Architecture

It is a great and beautiful spectacle to see a man somehow emerging from oblivion by his own efforts, dispelling with the light of his reason the shadows in which nature had enveloped him, rising above himself, soaring in his mind, like the sun, with giant strides through the vast extent of the universe, and what is even greater and more difficult, returning to himself in order to study man there and learn of his nature, his obligations, and his end. All of these marvelous things have been renewed in the past few generations.

—From *Discours sur les arts et sciences*, Jean-Jacques Rousseau, 1750 ⁸⁶

Poplar Forest is an autobiography of Jefferson in the sense that it is the product of a cumulative personal memory. It is Jefferson's life as he experienced it. Formed by a sustained act of will, which as Jefferson says:

Deeply practiced in the school of affliction, the human heart knows no joy which I have not lost, no sorrow of which I have not drunk! Fortune can present no grief of unknown form to me! Who then can bind up the wound of another as he who has felt the same wound himself?

The philosophy of the Enlightenment does not promise utopia, it offers an idea of how we should live. Jefferson, in retreating to the wilderness, returns to himself. His retreat is not a romantic return to nature, it is a return to his own natural state, to his *hôtel*

⁸⁶ This translation of *Rousseau's Discours sur les arts et sciences* is copyrighted by Ian Johnston of Malaspina University, Nanaimo, British Columbia (2014)

in Paris, to his honeymoon cottage, to the books consumed by fire at Shadwell, and to the solitude of Mount Valerian. This return, Jefferson tells us is the search for a philosophy⁸⁷ free of hope or fear, it is his existential foothold.

What did Jefferson imagine architecture to be? What is Poplar Forest in his imagination, and how might one tell the story of one's passions in a building? How does architecture speak?

Such characterization operated at every level of the scheme:⁸⁸ that of the plan organization as a whole and its projection into three dimensions—the massing of the building, the architectural motifs and attributes, that were added to reinforce the message. That is, the building should not only act as what the early twentieth century was to call a 'social condenser' by means of the machine-like operations of plan and section, but also speak of its social and moral purpose. (Vidler, 1987)

Poplar Forest is formed from the earth, 120,000 bricks worth, wooden beams, forged iron, and glass. It is a rural dwelling, on the fringes of wilderness, in a natural landscape from which arises a human order approbated by the Tuscan temple front. The walls do not conceal inner motives, the octogen laying its foundation on such principles and

⁸⁷ "The thinkers of the Age of Reason and the Enlightenment saw an urgent need for a secular foundation for morality, because they were haunted by a historical memory of centuries of religious carnage: The Crusades, the Inquisition, witch hunts, the European wars of religion. They laid that foundation in what we now call humanism, which privileges the well-being of individual men, women, and children over the glory of the tribe, race, nation, or religion. It is individuals, not groups, who are sentient—who feel pleasure and pain, fulfillment and anguish. Whether it is framed as the goal of providing the greatest happiness for the greatest number or as a categorical imperative to treat people as ends rather than means, it was the universal capacity of a person to suffer and flourish, they said, that called on our moral concern." (Pinker, 2018)

⁸⁸ "One sees Suitability (*Convenance*), Order (*Ordonnance*), Style, Decorum (*Bienséance*), and Symmetry, all of which have equal relationships among themselves that do not nevertheless exclude the picturesque; Variety, in all guises to which it is susceptible; Severity of principles; Unity of thoughts and of lines, Unity, the principle of all things, Unity so desirable and so desired [*Omnis porro pulchritudinis forma unitas est*] Fitness (*Commodité*) Distribution, which is welcomed in all levels of society; Decoration, which enlivens surfaces; Proportion, which purifies them; Genius, which exalts conceptions; Judgement, which regulates them; Reasoning, which discusses them; Method, which guides the stylo; Minerva, that wise Minerva, who sanctions the decree." (C. N. Ledoux, 1983)

organizing its power in such form radiates from its core in a mathematical precision extending from the cubic dining room⁸⁹ until disappearing into the primitive pre-architectural landscape from which it emerged; higher still a square platform to observe the vast extent of the universe, for as Longinus says “Our soul is raised out of nature through the truly sublime, sways with high spirits, and is filled with proud joy, as if itself had created what it hears” (*On the Sublime* as quoted in Herzog, 2010).

This portico, which shelters us, is not a temple to shelter the ancient gods, it shelters humanity, humanity in its flawed, fragile state, sheltered and protected by its ability to proportion nature’s order. From this sheltering sky we enter a narrow passage, wide enough for two abreast; for there is no entry hall in Poplar Forest, only the immediate and concise extension of interior to exterior space. The surprise that awaits us, the magic of Poplar Forest, is the beam of light which dispels the shadows that would envelope us.⁹⁰ This dining room is a harbor, a place of communion,⁹¹ of deliberation, and

⁸⁹ “... imagine a solid cube form, negative space is cut into its surface. The form remains whole although a section of negative space has been created.” (Alexander & Alexander, 2004)

⁹⁰ “A Babylonian in 1750 BCE would have had to labor fifty hours to spend one hour reading his cuneiform tablets by a sesame-oil lamp. In 1800, an Englishman had to toil for six hours to burn a tallow candle for an hour. (Imagine planning your family budget around that—you might settle for darkness.) In 1880, you’d need to work fifteen minutes to burn a kerosene lamp for an hour; in 1950, eight seconds for the same hour from an incandescent bulb; and in 1994, a half-second for the same hour from a compact fluorescent bulb—a 43,000-fold leap in affordability in two centuries. And the progress wasn’t finished: Nordhaus published his article before LED bulbs flooded the market. Soon, cheap, solar-powered LED lamps will transform the lives of the more than one billion people without access to electricity, allowing them to read the news or do their homework without huddling around an oil drum filled with burning garbage” (Pinker, 2018).

⁹¹ “But friendship is precious, not only in the shade but in the sunshine of life; & thanks to a benevolent arrangement of things, the greater part of life is sunshine” (Jefferson, 1785).

of reason.⁹² This is why Jefferson installed a skylight, that the light of reason could pour down upon the dweller. But this is not the highest order, according to the house's internal hierarchy, the Doric dining room is only a transformative space leading to the next ... the Ionic Parlor whose mirrors would have given us the sensation of being surrounded by nature, by observation, by reflection, interior and exterior are merged, just as mind and body are merged, just as perception and thought are merged, extending itself back to itself. Still, beyond the parlor is the south portico⁹³ which rises above nature in spite of being surrounded by it. Identical to that on the northern façade, the south portico is a new destination and there has been a transformation along the way. Jefferson has directed our movement to this new destination, for the sole access is to journey through the house, through the self to experience nature from a different perspective. Nature from which the house arises, observes its own nature and returns again to study its own nature, its obligations, its ends. Its *telos*.

This is Jefferson's contribution to the American identity, to human dignity: however overshadowed by suffering one may be, the mind has the ability to reason, our sciences observe our condition and hold the capacity to learn from error and in turn improve our state of knowledge of the world in which we live, that knowledge comes

⁹² "Thomas Jefferson explained the power of language with the help of an analogy: "He who receives an idea from me, receives instruction himself without lessening mine; as he who lights his taper at mine, receives light without darkening me" (Jefferson, 1813).

⁹³ "*This is the final lesson of the timeless way*. Imagine yourself building a simple porch ... a column to lean against ... so that you can walk out and lean and smell the summer air; and the yellow sunlight ... Imagine that you have reached the point, in your life where you are making such a porch. You are a different person now. The fact that you have understood the importance of these details, in your life, that you have understood how much they influence your life, means that you are now alive in a more simple sense" (Alexander, 1979, p. 548).

with a responsibility to act, to move through ignorance to achieve a better path, a path which we determine, in accordance with Nature, for we are whole with Nature and in shaping nature, we mold ourselves.



Figure 24. Poplar Forest, View Looking East in Central Dining Room. Thomas Jefferson. Photograph taken by the author in the context of the Corporation for Thomas Jefferson's Poplar Forest Architectural History Field School, July 2017.



Figure 25. Poplar Forest, View Looking South in Parlor. Thomas Jefferson. Photograph taken by the author in the context of the Corporation for Thomas Jefferson's Poplar Forest Architectural History Field School, July 2017. Wooden blocking in the brickwork offers evidence that mirrors were hung opposite the south facing triple sash windows, reflecting light, and reflecting the natural world back into the room.



Figure 26. Poplar Forest, Dining Room Facing North. Visitors would enter the house via the north portico and cross the narrow hallway (beyond the glass doors shown) to reach the Dining Room which is flooded with light.



Figure 27. Poplar Forest, Skylight. Jefferson's instructions for the skylight called for the opening to be fitted between the ceiling joists. The smudges visible on the mullions is an effort to waterproof the reconstruction of Jefferson's design.



Figure 28. Poplar Forest, Facing South in Entrance Hallway. The relative shadows of the hallway are displaced by the enfilade, which faces due South. The room beyond the glass doors is top-lit by Jefferson's skylight.



Figure 29. South Front of Poplar Forest. The pavilion with its Tuscan order and Roman arches on the ground floor give the appearance that the house is emerging from the landscape. The effect would be emphasized were the allée and hedges of Jefferson era were re-installed on either side of the sunken lawn.



Figure 30. Poplar Forest, View From the Roof Terrace Facing South. Although the view is now blocked by a modern grove of trees (which obscure a modern housing development) Poplar Forest's elevated position opens an immense vista.



Figure 31. Poplar Forest, Sky. "... we ride serene & sublime above the concerns of this mortal world, contemplating truth & nature, matter & motion, the laws which bind up their existence, & that eternal being who made & bound them up by those laws."

—Thomas Jefferson to Maria Cosway

CHAPTER V

OUTCOMES

Sapere Aude! (Dare to know)

I first visited Monticello as a young boy of six. The encounter had a remarkable influence on my sensing the microcosm of this person, unknown to me. His sharing of curiosity, innovation and imagination were mine. The experience shattered forever my understanding of what a house was and could be. Certainly, its formal qualities gave authority to this architectural thesis on the mountaintop. But that language was beyond my six-year old understanding. The memory of the experience is one of being awestruck by so many wonders of imagination. I still believe that imagination, is one of the keys to understanding Jefferson of Monticello.

I first encountered Poplar Forest as a young man of twenty-four. The house, which somehow extends beyond itself into the surrounding neighborhood, was roughly half the distance from our Outer Banks beach house and the family cemetery, on a mountaintop, where we were headed to grieve a much-loved great-aunt. The house had been lost (according to Jefferson scholars) to the vestiges of time. That it should be so resurrected speaks volumes about the now prevailing research underway to rediscover Jefferson as a private citizen in the Nation he had helped shape. On this first visit to Poplar Forest, shaded by grief, I saw none of the delight of “putting up” that Jefferson famously expressed. There was far too much to pull down in order to find any sense of

Jefferson that we might recognize. The memory of this experience, nevertheless, offered the curiosity instilled by this still unknown figure, separated from us by death. Poplar Forest came to embody a more mature reflection on life and mortality, which is key to understanding Jefferson of Poplar Forest.

Since those first encounters with Monticello and Poplar Forest, I have had numerous encounters with Jefferson, sometimes as one of the throngs of visitors that overwhelmed Monticello then, as it continues to do, sometimes as a student of Jefferson's world at the Poplar Forest Architectural Field School during the Summer of 2018, sometimes as a teacher with enthusiastic, well informed freshman from the design studios of the University of North Carolina Greensboro who inevitably congregate at Jefferson's garden pavilion to experience the expanse of Jefferson's vista; the "elevated situation, from which [one] might contemplate the universe" as Chastellux wrote. Most especially as an American expatriate living in Paris.

With Jefferson as my Ambassador to a particular historic vision of France, I never felt particularly far from my native Virginia. That is until I returned to it. Living abroad changes us, it makes us keen observers of the humanity reflecting all around us. One of us had changed, and there again was Mr. Jefferson's shadow knowing the sadness I was feeling being removed from my spiritual home and rediscovering the natural home of my birth. As Luc Ferry writes in *A Brief History of Thought*:

You enter into a larger and more universal sphere, that of another culture, and, if not a different humanity, at least a different community ... we partake of a greater humanity (Ferry, 2011).

Other events had transpired since my departure too; the Poplar Forest I had experienced as a grieving young man had at last been pulled down, and the house that Jefferson would have recognized was being put up again. I recognized it immediately, here was the Pavilion de Musique, the Petit Trianon, the Bagatelle, the vista from Mt Valerian (now a monument to the Americans who died fighting to defend the rights and liberties first scribed in Jefferson's drawing room at the Hôtel de Langeac). This was no technical recognition, nor a memory of the brilliance of French limestone, or glittering bronze. The recognition had far more to do with a shared state of mind, or as Gay says of the enlightenment project "a shared intellectual mood or style of thinking [related by a] series of aspirations rather than a series of doctrines." I was not looking at a historic house, but rather a philosophy of dwelling. And this is problematic given our means of describing such an experience:

The dominant constructions of the Enlightenment are in large part owed to a general failure to think history and philosophy in conjunction ... So, if it is right to say that the Philosopher's Enlightenment is largely indifferent to evidence and so impervious to revision, it also seems right to say that historians, ever more insistent that we get the facts right, risk losing sight of the object of their inquiry. (Boucher & Lloyd, 2017. p.14)

As Boucher later describes of Kant, the enlightenment is an attitude which individuals adopt, rather than the age they inhabit. Jefferson lived in his adopted philosophy, not in history, classical or otherwise, and Poplar Forest urges we unite in the same cause. Few house museums have such a capacity to overcome their own status as reliquaries and introduce us to how we should live—much of this in or time is certainly owed to its reconstructed designation. There is no need to provide UV filters (as Monticello) to

protect the finish of historic mahogany tabletops on which Jefferson was obliged to pay taxes. Nor are we cordoned away from being in the pure beam of light that Jefferson intended to bend our aching eyes. We may sit in his favorite chair and contemplate “truth and nature.”

There are other architects who would have us live through their eyes, and they have been described in historical terms in the previous chapters. Like Poplar Forest, the stylistic descriptions, the history of their construction, do not prepare us for their reality. Alas, none of Boullée’s sublime edifices exist to be experienced, we can only walk through the forests now to experience what he saw. Ledoux, on the other hand, is conversational to experience. Historically familiar, yet strange and new. The Rotonde de la Villette is visceral in its tension between earth and sky, the squat ground floor prostrated in heaving that cylindrical mass heavenward, or perhaps it is the inverse? Ledoux did not achieve this through an academic correctness, in fact was much criticized in his early work for abusing the Orders whose doctrine had long since been known to be inconsistent. Ledoux does to us the same that Pericles achieved in the Parthenon, even having never experienced the site for himself, he manages for us to feel the weight of the god that dwells in our midst. While Ledoux’ architectural/philosophical program has an instantaneous effect, and Jefferson’s is more measured and axial, we must come to similar conclusions. It is little wonder that Ledoux’ treatise on architecture is so little understood, for it is not about building at all, it is about why we build, it is about self-realization. So too is Poplar Forest.

What is the Role of Beauty?

Vitruvius, whose writing made Palladio possible, and whose work ignited the renaissance of European architecture, tells us that good architecture is comprised of *firmitas, utilitas, and venustas*; that is firmness, commodity, and ... the salient qualities of the goddess Venus. The definition is a British one, who render *venustas* as *delight*, in order to find the most titillating aspect of the goddess. Jefferson, perhaps, gives us a more transcendent approximation: “Here I am gazing whole hours at the Maison quarrée, like a lover at his mistress.” We might say desire, longing; we might say love. In any event we need an active definition, an attitude which expresses the experience of uniting our affection with our attainment. Beauty forces us, as individuals, to transcend our common experience and to grapple with our aspirations.

Aesthetics (from Greek *aisthētikos*, from *aisthēta* ‘perceptible things’, from *aisthēsthai* ‘perceive’) appears for the first time as a field of study in eighteenth century philosophical debate.⁹⁴ In the classical context (Plato for example) *beauty* and *goodness* are mutually inclusive terms; that which is good is necessarily beautiful regardless of physical form.⁹⁵ Subjects of beauty are held in esteem because they are morally good. Aesthetics, then, is associated with ethics in the classical understanding; it is not until the late Renaissance that the study of perceptions of beauty emerges.⁹⁶

⁹⁴ Alexander Baumgarten (1735) *Meditationes philosophicae de nonnullis ad poema pertinentibus* (Philosophical considerations of some matters pertaining the poem)

⁹⁵ Κάλλος [kallos] ‘beautiful, noble, good’ (Beekes & Beek, 2010)

⁹⁶ An eighteenth-century translation of a Latin work of literary criticism, *On the Sublime* by Longinus, reinvigorated the notion of a transcendent, heightened mode of expression, a quality which proves influential in Enlightenment taste cultures. The arousal of passion implied by sublimity offers a further

The value of the current phenomenological case study resides in its contribution to our understanding of aesthetic cultures. With the knowledge that the individual, subjective response is proof of a social response, aesthetics is not innately conflictual, rather it serves as a social condenser. That is to say that aesthetics resolves transactional issues, whether behavioral, interactional, or decisional, and one might add, personal. We confront opposing criteria in evaluating signs of interaction in aesthetic taste cultures, namely that the notion of aesthetic taste is largely considered to be a question of subjective choice, meaning that taste cannot be described in objective terms, nor should it.

Modern science is founded on the principle that reality is objective, and that a mechanical system of physical causes determines equally physical effects in a chain of events that form historical fact. That the physical reality of historic architecture offers itself for scrutiny, and that its structural reality offers tangible evidence for investigation, leads to a dominance of the mechanics of material authenticity, of authorship, and of stylistic influence in the field of historic design inquiry. The material approach, while offering signs of interaction between physical forms, fails to offer an understanding as to why some individuals value one form over another. There is more than a hint of bias towards the discovery of a power dynamic, a dynamic whose investigation leads inevitably to the impossible task of structuring a coherent culture to investigate.

degree of complexity to understanding the neoclassical imagination and its influence on debates regarding beauty.

Moreover, the philosophical thought processes (or value systems) which generates a given form is seen as corollary, rather than causal evidence of the physical. The dilemma is that physical evidence is not seen as evidence of a cognitive form—wherever such forms are sited. This position is stated by David Hume, one of the *Lumières* who participated in the Enlightenment debates on aesthetics:

But the whole, you say, wants a cause. I answer that the uniting of these parts into a whole ... is performed merely by an arbitrary act of the mind and has no influence on the nature of things. (Hume, 1779)⁹⁷

The implication of Hume’s position on the question of aesthetic choice is that subjective response has no bearing on objective reality, that value, or meaning, is not inherently structural. David Hume’s analysis persists, in Kant: “An aesthetic judgement is subjective in that it relates to the internal feeling of pleasure or displeasure and not to any qualities in an external object.” (Zangwill, 2014).

The subjective-objective duality is a problem for science, as much as it is for architectural theorists concerned with structural meaning. Theorist Michael Mehaffy (1955-present), in defense of Christopher Alexander, writes: “For scientists, it is exceedingly difficult to say anything coherent and useful about the physical world when one posits that it is entirely a subjective creation, or at any rate that it must be treated as such” (Mehaffy, 2006). The relationship between subjective sensation, and objective

⁹⁷ Jefferson, it seems, held some objection to Hume, going so far as to ban Hume’s work from the curriculum of the University of Virginia: “I remember well the enthusiasm with which I devoured it when young, and the length of time, the research, and reflection which were necessary to eradicate the poison it instilled into my mind” (Jefferson, 1810). Hume’s traditionalist philosophy is, it seems, a threat to Jefferson’s radical form of Enlightenment values.

reality, or rather the lack of a tangible causal relationship between the two, is key to understanding the development of eighteenth century French architectural theory and the moral dilemma posed by self-determination in the enlightened mind of the period. Jefferson recognized this dilemma as an affront to the enlightenment experiment, and used what he had learned in pre-Revolutionary France to give his own compatriots a model of how to live. In this sense, Poplar Forest is a philosophy in bricks and mortar and natural light.

The modern analog to the view which opposes Hume does so on the ground that physical structures are symmetrically related to cognitive images, however subjective:

the project of art is largely a project of liberation from authoritarian meanings constructed by elites. It is a recognition of the artificiality of such meanings, and therefore of their illegitimate claim to ‘objective reality.’ On the contrary, meaning is shown to be emergent in the structure of language and culture, and therefore, participatory in its essence. Meaning is a personal and social construct, to be built with others in a participatory fashion. (Mehaffy, 2006)

Meaning and form require no evidence beyond their isomorphic correspondence. If architecture serves as a cosmology, a signifier of the human condition within reality, ultimately, the question to which architecture responds is: what reality in the first place is, if not the inextricable unity of consciousness and body.

Jefferson too believed in the substantive nature of intangible causes in the Virginia Statue for Religious Freedom:⁹⁸

⁹⁸ The epitaph of Jefferson’s tombstone reads: “Here was buried Thomas Jefferson Author of the Declaration of American Independence of the Statute of Virginia for religious freedom & Father of the

Whereas Almighty God hath created the mind free; that all attempts to influence it by temporal punishment or burthens, or by civil incapacitations, tend only to beget habits of hypocrisy and meanness, and are a departure from the plan of the Holy author of our religion, who being Lord both of body and mind, yet chose not to propagate it by coercions on either, as was his Almighty power to do ...

In order to respond to the demand of his own skylight, Jefferson had to form an operative, *cognitive* framework formed by an alternative means of human understanding, marked by a shift from exterior, cosmological purposes to one of interiorized, human aspiration, self-realization, which the Enlightenment, and its principle of self-determination, sought to fulfill. However, such a task, without beauty to lift us beyond the self, to unite us as a culture is irredeemable.

In order to understand why Jefferson installed a skylight at Poplar Forest, this study has examined the interaction of intangible causes, or consciousness, which results in the tangible manifestation that is the built environment. In spite of the challenges of reconciling the need for a rational, evidence-based truth concerning Jefferson's reality, and the aspirations of his philosophy; a reality and an aspiration which continue to influence our present-day experiences, we can find a means of unifying:

We create with our most beloved, an apprenticeship of the fact that we are prepared to transcend ourselves, to accept the transcendence of the other, thus discovering or rediscovering the sacred and meaning, that we can also mobilize ourselves for causes which touch future generations ... that which arises in the self [immanence], everything transpires as if the values are imposed on one's subjectivity, as if they are coming from beyond the self (transcendence).⁹⁹

University of Virginia." At Jefferson's request, these are the testimonials by which he wished to be remembered.

⁹⁹ This sentiment is the complete definition of Vitruvius' latin term *venustas*. Commonly translated as *delight* in English, and as *beauty* in French. Christopher Alexander's *The Luminous Ground* further discusses this self-transcendence made possible by a pursuit of wholeness; a pursuit unimaginable in

Further Research

While, this study is a non-exhaustive assessment of Jefferson's architectural imagination, it is merely illustrative of the approach we may take in interpreting a cultural artifact like a skylight. The application of the "life world" approach to historic design research asks that the physical artifacts we value respond to the thoughts we have in experiencing them. For it is just such ideas which condition our environment to be more than a piece of a system from which we are entirely detached. To know what brought something into being makes us the stewards of that knowledge.

The ongoing reconstruction of Poplar Forest offers a unique view into the process of architectural history, just as it is a unique view into Jefferson's architectural imagination. The ongoing process of reconstruction has been left untreated by the author with the hopeful expectation that those who are directly involved in the process will publish findings. Some of the publications and articles from the Corporation for Thomas Jefferson's Poplar Forest are listed in the general bibliography. The curious can also attend the Poplar Forest Field School for an intensive study of the reconstruction process, Jeffersonian architecture, and the needs of museum design. Once we have a more comprehensive statement of the reconstruction, a phenomenological investigation of structural components, craft, and materials would be an intriguing study.

Glass as a material example has its own rich history of being. In spite of its importance to Poplar Forest, and to its skylight particularly, the subject was only

modern philosophy. Translation by the Author from the French: "...nous faisons, avec nos proches, l'apprentissage du fait que nous sommes prêts à sortir de nous-mêmes, à admettre la transcendance de l'autre, donc à trouver ou retrouver du sacré et du sens, que nous pouvons aussi nous mobiliser pour des causes touchant les générations futures ... Quoique situées en moi [immanence], tout se passe comme si ces valeurs s'imposaient à ma subjectivité, comme si elles venaient d'ailleurs [transcendance]"

minimally treated in this written document. It is certainly recognized that glass was used extensively in Poplar Forest and contributes greatly to its character. The use of glass at Poplar Forest is open to interpretation in ways that reach far more profound understanding about the architecture and history of the United States from obsidian arrow heads to the exploration of the solar system. A phenomenological treatment of glass is begging for attention. The Juliette K. and Leonard S. Rakow Research Library of The Corning Museum of Glass is a promising source for scholars, designers and innovators alike.

A new generation of Jefferson scholars have taken bold approaches to understanding Jefferson's world. *The Body of Jefferson*, *The Mind of Jefferson*, *Most Blessed of the Patriarchs*, and *Thomas Jefferson & Sally Hemings*, have all taken approaches that ask new questions concerning our understanding of Jefferson as a living breathing human in whose aspirations we currently dwell. The nationalistic heroics of earlier biographies is giving way to the human version of Jefferson and we find that we share with him many of the same frustrations in the world. It is important to understand the living Jefferson before time has distanced us from our own origins, and a more extensive assessment of Jefferson's architectural experience would greatly improve our connection and understanding of our own lived experience. It is hoped that the approach used in works that have influenced the current research will be more broadly applied to our knowledge of the built environment.

WORKS CITED

- About Poplar Forest | Historical Places in Virginia. (n.d.). Retrieved October 19, 2018, from Thomas Jefferson's Poplar Forest website:
<https://www.poplarforest.org/about/>
- Admin. (2018, February 21). Chase, George Henry [Text]. Retrieved October 8, 2018, from Index IV "Publications." Beazley, John D. Attic Red-Figure Vase-Painters. 2nd ed. vol. 3. Oxford: Oxford University Press, 1963 [Chase's name appears out of alphabetical order in the ARV]; S[tephen] B. L[uce]. American Journal of Archaeology 56 (July 1952): 180-181; "Dr. George Chase of Harvard Dies: University's First Dean, Acting President in World War II, Retired From Staff in '45." New York Times February 4, 1952, p. 17. website:
<http://arthistorians.info/chaseg>
- Alexander, C. (1979). *The timeless way of building* (24. print). New York, NY: Oxford Univ. Press.
- Alexander, C., & Alexander, C. (2004). *The luminous ground: an essay on the art of building and the nature of the universe*. Berkeley, Calif: Center for Environmental Structure.
- Alexander, C., Ishikawa, S., & Silverstein, M. (1977). *A pattern language: towns, buildings, construction*. New York: Oxford University Press.
- Batteux, C. (1746). *Les beaux-arts reduits a une meme principe*. Paris.

- Baudez, B. (Ed.). (2017). *Chalgrin et son temps: architectes et architecture de l'Ancien Régime à la Révolution*. Bordeaux: William Blake.
- Beekes, R. S. P., & Beek, L. van. (2010). *Etymological dictionary of Greek*. Leiden ; Boston: Brill.
- Boucher, G., & Lloyd, H. M. (2017). *Rethinking the Enlightenment: Between History, Philosophy, and Politics*. Lexington Books.
- Boullée, E.-L. (n.d.). *Architecture, essay on Art* (H. Rosenau, Ed.; S. de Vallée, Trans.). Bibliothèque Nationale de France.
- Brown, C. A. (1987). *Poplar Forest: Thomas Jefferson and the Ideal Villa* (Masters). University of Virginia School of Architecture.
- Chambers, S. A. (1998). *Poplar Forest & Thomas Jefferson*. Forest, Va.: Published for the Corporation for Jefferson's Poplar Forest in commemoration of the 250th anniversary of the birth of Thomas Jefferson.
- Cooper, K. W., & Dyer, J. B. (2017). Thomas Jefferson, Nature's God, and the Theological Foundations of Natural-Rights Republicanism. *Politics and Religion*, 10(03), 662–688. <https://doi.org/10.1017/S1755048317000104>
- Eco, U., & McEwen, A. (2010). *History of beauty*. New York: Rizzoli
- Emmons, P., Hendrix, J., & Lomholt, J. (Eds.). (2012). *The cultural role of architecture: contemporary and historical perspectives*. Milton Park, Abingdon, Oxon ; New York, NY: Routledge.
- Ferry, L. (1993). *Homo aestheticus: the invention of taste in the democratic age*. Chicago: The University of Chicago Press.

- Ferry, L. (2011). *A brief history of thought: a philosophical guide to living*. New York: Harper Perennial.
- Frascari, M. (2011). *Eleven Exercises in the Art of Architectural Drawing: Slow Food for the Architect's Imagination*. London; New York: Routledge.: Routledge.
- Ginsborg, H. (2014). Kant's Aesthetics and Teleology. In E. N. Zalta (Ed.), *The Stanford Encyclopedia of Philosophy* (Fall 2014). Retrieved from <https://plato.stanford.edu/archives/fall2014/entries/kant-aesthetics/>
- Groenewald, T. (2004). A Phenomenological Research Design Illustrated. *International Journal of Qualitative Methods*, 3(1), 42–55.
<https://doi.org/10.1177/160940690400300104>
- Gros, P. (2008). Architectura - Les livres d'Architecture. Retrieved April 30, 2019, from http://architectura.cesr.univ-tours.fr/Traite/Notice/ENSBA_01665A0013.asp?param=en
- Herzog, W. (n.d.). On the Absolute, the Sublime, and Ecstatic Truth | Arion (M. Weigel, Trans.). Retrieved June 21, 2019, from <https://www.bu.edu/arion/on-the-absolute-the-sublime-and-ecstatic-truth/>
- Howard, H. (2006). *Dr. Kimball and Mr. Jefferson: a journey into America's architectural past* (1st U.S. ed). New York: Bloomsbury Pub.
- Husserl, E. (1999). *Cartesian meditations: an introduction to phenomenology* (12. impr). Dordrecht: Kluwer Academic Publ.
- Hycner, R. H. (1985). Some Guidelines for the Phenomenological Analysis of Interview Data. *Human Studies*, 8(3), 279–303. <https://doi.org/10.1007/BF00142995>

In-Depth Research on a Thomas Jefferson Historical Site. (n.d.). Retrieved April 22, 2019, from Thomas Jefferson's Poplar Forest website:

<https://www.poplarforest.org/learn/architectural-restoration/restoration-process/research/>

Jefferson, T. (1789). To James Madison Paris, Sep. 6, 1789 < The Letters of Thomas Jefferson 1743-1826 < Thomas Jefferson < Presidents < American History From Revolution To Reconstruction and beyond. Retrieved June 22, 2019, from <http://www.let.rug.nl/usa/presidents/thomas-jefferson/letters-of-thomas-jefferson/jefl81.php>

Jefferson, T., Wilson, D. L., & Jefferson, T. (1989). *Jefferson's literary commonplace book*. Princeton, N.J: Princeton University Press.

Jung, C. G. (1969). *The Archetypes and the Collective Unconscious*. Princeton University Press.

Kaufmann, E. (1966). *Architecture in the age of reason: Baroque and Post-Baroque in England, Italy, and France* (1. publ). New York, NY: Archon Books.

Kimball, F. (1968). *Thomas Jefferson, architect*. Place of publication not identified: Da Capo Press.

Kimball, F., & Edgell, G. H. (1918). *A History of Architecture*. New York and London:Harpers & Brothers Publishers.

Lang, J. T. (1987). *Creating architectural theory: the role of the behavioral sciences in environmental design*. New York: Van Nostrand Reinhold Co.

- Langlois, C. V., Seignobos, C., & Berry, G. G. (2009). *Introduction to the Study of History*. Retrieved from https://books.google.com/books?id=_mhuQgAACAAJ
- Lanza, R., & Berman, B. (2010). *How life and consciousness are the keys to understanding the true nature of the universe*. Dallas, Tex.: Benbella.
- Ledoux, C. N. (1983). *Architecture de C.N. Ledoux: premier volume, contenant des plans, élévations, coupes, vues perspectives ...: collection qui rassemble tous les genres de bâtiments employés dans l'ordre social*. [Princeton, N.J: Princeton Architectural Press : Avery Architectural and Fine Arts Library of Colombia University.
- Ledoux, C. N. (1736-1806) A. du texte. (1804). *L'architecture considérée sous le rapport de l'art, des moeurs et de la législation. Tome 1 / ; par C.-N. Ledoux. Tome premier*. Retrieved from <http://gallica.bnf.fr/ark:/12148/bpt6k857284>
- Lilla, M. (2014). *New french thought: political philosophy*.
- M Reiners, G. (2012). Understanding the Differences between Husserl's (Descriptive) and Heidegger's (Interpretive) Phenomenological Research. *Journal of Nursing & Care, 01(05)*. <https://doi.org/10.4172/2167-1168.1000119>
- McCormick, T. J. (1990). *Charles-Louis Clérisseau and the genesis of neo-classicism*. New York, N.Y. : Cambridge, Mass: Architectural History Foundation ; MIT Press.
- Mehaffy, M. (2006). Meaning and the Structure of Things. *Katarxis, 3*. Retrieved from http://www.katarxis3.com/Mehaffy_Meaning.htm

- Merriam-Webster Inc. (1995). *Merriam-Webster's Medical Dictionary*. Merriam-Webster.
- Morgan, D. (Ed.). (2010). *Religion and material culture: the matter of belief*. London ; New York: Routledge.
- Moustakas, C. (1994). *Phenomenological Research Methods*. SAGE.
- Norberg-Schulz, C. (1980). *Genius loci: towards a phenomenology of architecture*. New York: Rizzoli.
- Norberg-Schulz, C. (1985). *The concept of dwelling: on the way to figurative architecture*. [Milan] : New York: Electa ; Rizzoli.
- Norberg-Schulz, C. (1992). *Intentions in Architecture* (9. print). Cambridge, Mass: M.I.T. Press.
- Pérouse de Montclos, J.-M. (2013). *L'architecture à la française: du milieu du XVe siècle à la fin du XVIIIe siècle*. Paris: Picard.
- Pinker, S. (2018). *Enlightenment now: the case for reason, science, humanism, and progress*. New York, New York: Viking, an imprint of Penguin Random House LLC.
- Quimper, M. of F. A. of the city of. (n.d.). Jean-Simon Berthélémy Sunrise on the chariot of Aurora. Retrieved October 11, 2018, from Museum of Fine Arts of the city of Quimper : Site Internet website: <http://www.mbaq.fr/en/our-collections/the-french-paintings-17th-and-18th-centuries/jean-simon-berthelemy-sunrise-on-the-chariot-of-aurora-339.html>

- Rice, H. C. (1976). *Thomas Jefferson's Paris*. Princeton, N.J: Princeton University Press.
- Seeing History | Langlois et Seignobos. (n.d.). Retrieved October 8, 2018, from <https://www.umass.edu/wsp/history/outline/langlois.html>
- Smick, J. (2017). The Verwindung of Secular Philosophy in Luc Ferry and Jean-Luc Marion. *The Journal of Scriptural Reasoning*, 13(1). Retrieved from <http://jsr.shanti.virginia.edu/back-issues/vol-13-no-1-june-2014-phenomenology-and-scripture/the-verwindung-of-philosophy-in-luc-ferry-and-jean-luc-marion/>
- Smith, D. W. (2018). Phenomenology. In E. N. Zalta (Ed.), *The Stanford Encyclopedia of Philosophy* (Summer 2018). Retrieved from <https://plato.stanford.edu/archives/sum2018/entries/phenomenology/>
- Sprinkle Jr., J. H. (n.d.). Fiske Kimball's National Park Service Memoir. Retrieved from CRM: The Journal of Heritage Stewardship, Volumes 1-8 website: <https://www.nps.gov/CRMjournal/Summer2010/article.html>
- Vidler, A. (1987). *The writing of the walls: architectural theory in the late enlightenment*. Princeton, N.J: Princeton Architectural Press.
- Wittkower, R., Connors, J., & Montagu, J. (1999). *Art and architecture in Italy, 1600-1750* (6th ed). New Haven: Yale University Press.
- Zangwill, N. (2014). Aesthetic Judgment. In E. N. Zalta (Ed.), *The Stanford Encyclopedia of Philosophy* (Fall 2014). Retrieved from <https://plato.stanford.edu/archives/fall2014/entries/aesthetic-judgment/>

WORKS CONSULTED

About Poplar Forest | Historical Places in Virginia. (n.d.). Retrieved October 19, 2018,

from Thomas Jefferson's Poplar Forest website:

<https://www.poplarforest.org/about/>

Adam, R., & Bartolozzi, F. (1764). *Ruins of the palace of the Emperor Diocletian at*

Spalatro in Dalmatia. Retrieved from

<http://archive.org/details/RuinspalaceEmpe00Adam>

Adams, W. H. (1983). *Jefferson's Monticello*. New York, NY: Abbeville Press.

Adams, W. H. (1997). *The Paris years of Thomas Jefferson*. New Haven: Yale University Press.

Admin. (2018, February 21). Chase, George Henry [Text]. Retrieved October 8, 2018,

from Index IV "Publications." Beazley, John D. Attic Red-Figure Vase-Painters.

2nd ed. vol. 3. Oxford: Oxford University Press, 1963 [Chase's name appears out

of alphabetical order in the ARV]; S[tephen] B. L[uce]. American Journal of

Archaeology 56 (July 1952): 180-181; "Dr. George Chase of Harvard Dies:

University's First Dean, Acting President in World War II, Retired From Staff in

'45." New York Times February 4, 1952, p. 17. website:

<http://arthistorians.info/chaseg>

Alanen, A. R., & Melnick, R. (Eds.). (2000). *Preserving cultural landscapes in America*.

Baltimore: Johns Hopkins University Press.

- Alberti, L. B. (1988). *On the art of building in ten books*. Cambridge, Mass: MIT Press.
- Alexander, C. (1979). *The timeless way of building* (24. print). New York, NY: Oxford Univ. Press.
- Alexander, C., & Alexander, C. (2004). *The luminous ground: an essay on the art of building and the nature of the universe*. Berkeley, Calif: Center for Environmental Structure.
- Alexander, C., Ishikawa, S., & Silverstein, M. (1977). *A pattern language: towns, buildings, construction*. New York: Oxford University Press.
- Anezin, G. (1998). *La Saline royale d'Arc et Senans*. Paris: Beaux arts magazine.
- Arakawa, S., & Gins, M. (1988). *The mechanism of meaning*. New York: Abbeville Press.
- Archer, J. (2005). *Architecture and suburbia: from English villa to American dream house, 1690--2000*. Minneapolis: University of Minnesota Press.
- Aristotle's Political Theory > Presuppositions of Aristotle's Politics (Stanford Encyclopedia of Philosophy). (n.d.). Retrieved April 25, 2019, from <https://plato.stanford.edu/entries/aristotle-politics/supplement2.html>
- Attfield, J. (2000). *Wild things: the material culture of everyday life*. Oxford: Berg.
- Bachelard, G., & Jolas, M. (1994). *The poetics of space*. Boston: Beacon Press.
- Barletta, B. A. (2001). *The origins of the Greek architectural orders*. Cambridge ; New York: Cambridge University Press.
- Barral, M. R. (n.d.). *Merleau-Ponty: the role of the body-subject in interpersonal relations*.

- Bastide, J.-F. de. (1996). *The little house: an architectural seduction* (1st ed). New York: Princeton Architectural Press.
- Batteux, C. (1746). *Les beaux-arts réduits a une meme principe*. Paris.
- Baudez, B. (Ed.). (2017). *Chalgrin et son temps: architectes et architecture de l'Ancien Régime à la Révolution*. Bordeaux: William Blake.
- Beekes, R. S. P., & Beek, L. van. (2010). *Etymological dictionary of Greek*. Leiden ; Boston: Brill.
- Beltramini, G., Lenzo, F., Romano, F., & Museo Palladio. (2015). *Jefferson and Palladio: constructing a new world*.
- Bensman, J., & Lilienfeld, R. (1979). *Between public and private: the lost boundaries of the self*. New York: Free Press.
- Berger, A. A. (2014). *What objects mean: an introduction to material culture* (Second Edition). Walnut Creek, CA: Left Coast Press.
- Bernardin de Saint-Pierre, H. (1737-1814) A. du texte. (1789). *Voeux d'un solitaire, pour servir de suite aux Études de la nature, par Jacques-Bernardin-Henri de Saint-Pierre. - Suite des Voeux d'un solitaire, pour servir de complément au 5e volume des "Études de la nature", avec la Chaumière indienne [et le Café de Surate], par Jacques-Bernardin-Henri de Saint-Pierre*. Retrieved from <https://gallica.bnf.fr/ark:/12148/btv1b8613382n>
- Bernier, O. (1981a). *Pleasure and privilege: life in France, Naples, and America, 1770-1790* (1st ed). Garden City, N.Y: Doubleday.

- Bernier, O. (1981b). *The eighteenth-century woman*. Garden City, N.Y. : New York: Doubleday ; Published in association with the Metropolitan Museum of Art.
- Bertotti Scamozzi, O., Cox, W. J., McReynolds, D. R., Palladio, A., & Bertotti Scamozzi, O. (2015). *The buildings and designs of Andrea Palladio* (First edition). New York: Princeton Architectural Press.
- Blondel, J. F. (2012). *De la distribution des maisons de plaisance et de la décoration des édifices en général*. S.l.: Nabu Press.
- Bloomer, K. C., & Moore, C. W. (1977). *Body, memory, and architecture*. New Haven: Yale University Press.
- Boivin, N. (2008). *Material cultures, material minds: the impact of things on human thought, society, and evolution*. Cambridge ; New York: Cambridge University Press.
- Boucher, G., & Lloyd, H. M. (2017). *Rethinking the Enlightenment: Between History, Philosophy, and Politics*. Lexington Books.
- Boullée, E.-L. (n.d.). *Architecture, essay on Art* (H. Rosenau, Ed.; S. de Vallée, Trans.). Bibliothèque Nationale de France.
- Braham, A. (1980). *The architecture of the French Enlightenment*. Berkeley: University of California Press.
- Brown, C. A. (1987). *Poplar Forest: Thomas Jefferson and the Ideal Villa* (Masters). University of Virginia School of Architecture.
- Burstein, A. (2005). *Jefferson's secrets: death and desire at Monticello*. New York: Basic Books.

- Caplan, R. (2005). *By design: why there are no locks on the bathroom doors in the Hotel Louis XIV and other object lessons* (2nd ed). New York: Fairchild Publications.
- Cataldi, S. L., & Hamrick, W. S. (Eds.). (2007). *Merleau-Ponty and environmental philosophy: dwelling on the landscapes of thought*. Albany: State University of New York Press.
- Chambers, S. A. (1998a). *Poplar Forest & Thomas Jefferson*. Forest, Va.: Published for the Corporation for Jefferson's Poplar Forest in commemoration of the 250th anniversary of the birth of Thomas Jefferson.
- Ching, F. D. K. (2014). *Architecture: form, space, & order* (Fourth edition). Hoboken, New Jersey: Wiley.
- Cognitive Phenomenology | Internet Encyclopedia of Philosophy. (n.d.). Retrieved June 7, 2019, from <https://www.iep.utm.edu/cog-phen/>
- Commonplace Books And Combinatorial Creativity. (2014, July 21). Retrieved October 28, 2018, from Farnam Street website: <https://fs.blog/2014/07/networked-knowledge-and-combinatorial-creativity/>
- Cooper, K. W., & Dyer, J. B. (2017). Thomas Jefferson, Nature's God, and the Theological Foundations of Natural-Rights Republicanism. *Politics and Religion*, 10(03), 662–688. <https://doi.org/10.1017/S1755048317000104>
- Creswell, J. W., & Creswell, J. W. (2007). *Qualitative inquiry & research design: choosing among five approaches* (2nd ed). Thousand Oaks: Sage Publications.
- Dabbrowski, K. (1995, October 26). The Theory of Positive Disintegration. Retrieved from Positivedisintegration.com website: www.positivedisintegration.com

- Deane, D., & Butler, S. (2016). *Nationalism and Architecture*. Routledge.
- delle Donne, V. (2010). How Can We Explain Beauty?: A Psychological Answer to a Philosophical Question. *Proceedings of the European Society for Aesthetics*, 2.
- Dietz, L. (1976). *Jefferson and the arts: an extended view*. Place of publication not identified: Univ Of Virginia Press.
- Duveen, G., Lloyd, B. B., & British Psychological Society (Eds.). (1990). *Social representations and the development of knowledge*. Cambridge [England] ; New York: Cambridge University Press.
- Duvernois, C., & Halard, F. (2008). *Marie Antoinette and the last garden at Versailles*. New York : New York: Rizzoli ; Distributed to the U.S. trade by Random House.
- Eagleton, T. (1990). *The ideology of the aesthetic*. Oxford, UK ; Cambridge, Mass., USA: Blackwell.
- Eaton_LostInTranslation_0.pdf*. (n.d.). Retrieved from https://www.amphilsoc.org/sites/default/files/2018-05/attachments/Eaton_LostInTranslation_0.pdf
- Eco, U., & McEwen, A. (2010). *History of beauty*. New York: Rizzoli.
- Emil Kaufmann. (2013). *Architecture in the age of reason*. Retrieved from <http://public.eblib.com/choice/publicfullrecord.aspx?p=3047031>
- Emmons, P., Hendrix, J., & Lomholt, J. (Eds.). (2012). *The cultural role of architecture: contemporary and historical perspectives*. Milton Park, Abingdon, Oxon ; New York, NY: Routledge.

ENCCRE - Édition Numérique Collaborative et Critique de l'Encyclopédie. (n.d.).

Retrieved April 25, 2019, from <http://enccre.academie-sciences.fr/encyclopedie/>

Etlin, R. A. (1994). *Symbolic space: French Enlightenment architecture and its legacy*.

Chicago: University of Chicago Press.

Farr, R. M., & Moscovici, S. (Eds.). (1984). *Social representations*. Cambridge

[Cambridgeshire] ; New York : Paris: Cambridge University Press ; Editions de la
Maison des Sciences de l'Homme.

Ferry, L. (1993). *Homo aestheticus: the invention of taste in the democratic age*.

Chicago: The University of Chicago Press.

Ferry, L. (2011). *A brief history of thought: a philosophical guide to living*. New York:

Harper Perennial.

Ficacci, L., & Piranesi, G. B. (2000). *Giovanni Battista Piranesi: the complete etchings =*

Gesamtkatalog der Kupferstiche = catalogue raisonné des eaux-fortes. Köln:

Taschen.

Fiske Kimball Papers, 1874-1957, undated. (n.d.). Retrieved October 17, 2018, from

http://dla.library.upenn.edu/cocoon/dla/pacscl/ead.html?sort=title_sort%20asc&fq=subject_corporate_name_facet%3A%22Architectural%20Record%22&id=PACSCL_PMA_PUBLICUSPPPMFKPFiskeKimballPapershttpwwwphilamuseumorgresourcesarchivesFindingAidFKPxmlUSPPPM&

Fletcher, B., & Musgrove, J. (1987). *Sir Banister Fletcher's A history of architecture*

(19th ed). London ; Boston: Butterworths.

- Foucault, M. (n.d.). Of Other Spaces: Utopias and Heterotopias. In J. Miskowiec (Trans.), *Des Espace Autres*. Retrieved from <http://web.mit.edu/allanmc/www/foucault1.pdf>
- Founders Online: From Thomas Jefferson to Spencer Roane, 6 September 1819. (n.d.-a). Retrieved June 16, 2019, from <http://founders.archives.gov/documents/Jefferson/98-01-02-0734>
- Founders Online: Recommendation of John Neilson, 7 August 1812. (n.d.-b). Retrieved June 16, 2019, from <http://founders.archives.gov/documents/Jefferson/03-05-02-0237>
- Founders Online: Thomas Jefferson to William Duane, 12 August 1810. (n.d.-c). Retrieved October 31, 2018, from <http://founders.archives.gov/documents/Jefferson/03-03-02-0001-0002>
- Founders Online: To Thomas Jefferson from Chastellux, 27 December [1784]. (n.d.-d). Retrieved October 28, 2018, from <http://founders.archives.gov/documents/Jefferson/01-07-02-0427>
- Gallagher, W. (2007). *The power of place: how our surroundings shape our thoughts, emotions, and actions* (1st HarperPerennial ed). New York: HarperPerennial.
- Gerbino, A., & Blondel, F. (2010). *François Blondel: architecture, erudition, and the scientific revolution*. London; New York: Routledge.
- Ginsborg, H. (2014). Kant's Aesthetics and Teleology. In E. N. Zalta (Ed.), *The Stanford Encyclopedia of Philosophy* (Fall 2014). Retrieved from <https://plato.stanford.edu/archives/fall2014/entries/kant-aesthetics/>

- Gombrich, E. H. (2000). *Art and illusion: a study in the psychology of pictorial representation* (Millennium ed., with a new preface by the author). Princeton: Princeton University Press.
- Gordon-Reed, A., & Onuf, P. S. (2016). "*Most blessed of the patriarchs*": *Thomas Jefferson and the empire of the imagination* (First edition). New York: Liveright Publishing Corporation.
- Grafton, A. (2006). The History of Ideas: Precepts and Practice, 1950-2000 and Beyond. *Journal of the History of Ideas*, 67(1), 1–32.
- Green, B. C., & Blackburn, T. R. (2006). *In Jefferson's shadow: the architecture of Thomas R. Blackburn* (1st ed). [Richmond, Va.] : New York: Virginia Historical Society ; In Association with Princeton Architectural Press.
- Greenberg, A. (2006). *The architecture of democracy: American architecture and the legacy of the Revolution*. New York: Rizzoli.
- Gregory, D., & Urry, J. (Eds.). (1985). *Social relations and spatial structures*. New York: St. Martin's Press.
- Grimmer, A. E. (1994). *Historic building interiors: An annotated bibliography*. U.S. Dept. of the Interior, National Park Service, Cultural Resources, Preservation Assistance Division.
- Groat, L. N., & Wang, D. (2013). *Architectural research methods* (2. ed. [updated and expanded]). Hoboken, NJ: Wiley.

- Gros, P. (2008). *Architectura - Les livres d'Architecture*. Retrieved April 30, 2019, from http://architectura.cesr.univ-tours.fr/Traite/Notice/ENSBA_01665A0013.asp?param=en
- Gruson, L. (2009). *Claude Nicolas Ledoux, visionary architecture and social utopia*. Besançon, France.
- Hall, E. T. (1982). *The hidden dimension*. Garden City, N.Y: Doubleday.
- Herrmann, W. (1985). *Laugier and eighteenth century French theory*. London: Zwemmer.
- Herzog, W. (n.d.). On the Absolute, the Sublime, and Ecstatic Truth | Arion (M. Weigel, Trans.). Retrieved June 21, 2019, from <https://www.bu.edu/arion/on-the-absolute-the-sublime-and-ecstatic-truth/>
- Hight, M. A. (2008). *Idea and ontology: an essay in early modern metaphysics of ideas*. University Park, Pa: Pennsylvania State University Press.
- Hiss, T. (1991). *The experience of place* (1st Vintage Books ed). New York: Vintage Books.
- Holl, S., Pallasmaa, J., & Pérez-Gómez, A. (2008). *Questions of perception: phenomenology of architecture*. San Francisco, CA: William Stout Pub.
- Houlgate, S. (2016). Hegel's Aesthetics. In E. N. Zalta (Ed.), *The Stanford Encyclopedia of Philosophy* (Spring 2016). Retrieved from <https://plato.stanford.edu/archives/spr2016/entries/hegel-aesthetics/>
- Husserl, E. (1999). *Cartesian meditations: an introduction to phenomenology* (12. impr). Dordrecht: Kluwer Academic Publ.

- Hycner, R. H. (1985). Some Guidelines for the Phenomenological Analysis of Interview Data. *Human Studies*, 8(3), 279–303. <https://doi.org/10.1007/BF00142995>
- Isaac, N. (1671, February 19). *Philosophical Transactions: A Letter of Mr. Isaac Newton, Mathematick Professor in the University of Cambridge; containing his new theory about light and color.*
- Ishimoto, Y. (1960). *Katsura: tradition and creation in Japanese architecture* (C. S. Terry, Trans.). New Haven: Yale University Press.
- Israel, J. I. (2001). *Radical enlightenment: philosophy and the making of modernity, 1650-1750*. Oxford ; New York: Oxford University Press.
- Israel, J. I. (2010). *A revolution of the mind: Radical Enlightenment and the intellectual origins of modern democracy*. Princeton, N.J: Princeton University Press.
- Janiak, A. (2016). Newton's Philosophy. In E. N. Zalta (Ed.), *The Stanford Encyclopedia of Philosophy* (Winter 2016). Retrieved from <https://plato.stanford.edu/archives/win2016/entries/newton-philosophy/>
- Jefferson, T. (1789). To James Madison Paris, Sep. 6, 1789 < The Letters of Thomas Jefferson 1743-1826 < Thomas Jefferson < Presidents < American History From Revolution To Reconstruction and beyond. Retrieved June 22, 2019, from <http://www.let.rug.nl/usa/presidents/thomas-jefferson/letters-of-thomas-jefferson/jefl81.php>
- Jefferson, T., & Baron, R. C. (1987). *The garden and farm books of Thomas Jefferson*. Golden, Colo: Fulcrum.

- Jefferson, T., & Brandt, A. (2007). *Thomas Jefferson travels: selected writings, 1784-1789*. Washington, DC: National Geographic Society.
- Jefferson, T., Library of Congress, & Manuscript Division. (1976). *Thomas Jefferson papers*. Washington: Manuscript Division, Reference Dept., Library of Congress.
- Jefferson, T., Wilson, R. G., & Sherwood, P. C. (1993). *Thomas Jefferson's academical village: the creation of an architectural masterpiece*. Charlottesville: Bayly Art Museum of the University of Virginia : Distributed by Univ. Press of Virginia.
- Jung, C. G. (1969). *The Archetypes and the Collective Unconscious*. Princeton University Press.
- Katarxis 3: New Science, New Urbanism -- New Architecture? (n.d.). Retrieved October 25, 2018, from <http://www.katarxis3.com/>
- Kaufmann, E. (1966). *Architecture in the age of reason: Baroque and Post-Baroque in England, Italy, and France* (1. publ). New York, NY: Archon Books.
- Kimball, F. (1980). *The creation of the rococo decorative style*. New York: Dover Publications.
- Kimball, F., & Edgell, G. H. (1918). *A History of Architecture*. New York and London: Harpers & Brothers Publishers.
- Lang, J. T. (1987). *Creating architectural theory: the role of the behavioral sciences in environmental design*. New York: Van Nostrand Reinhold Co.
- Lanza, R., & Berman, B. (2010). *How life and consciousness are the keys to understanding the true nature of the universe*. Dallas, Tex.: Benbella.

- Le Camus de Mézières, N. (1992). *The genius of architecture, or, The analogy of that art with our sensations*. Santa Monica, CA : [Chicago]: Getty Center for the History of Art and the Humanities ; Distributed by the University of Chicago Press.
- Ledoux, C. N. (1983). *Architecture de C.N. Ledoux: premier volume, contenant des plans, élévations, coupes, vues perspectives ...: collection qui rassemble tous les genres de bâtiments employés dans l'ordre social*. [Princeton, N.J: Princeton Architectural Press : Avery Architectural and Fine Arts Library of Columbia University.
- Ledoux, C. N. (1736-1806) A. du texte. (1804). *L'architecture considérée sous le rapport de l'art, des moeurs et de la législation. Tome 1 / ; par C.-N. Ledoux. Tome premier*. Retrieved from <http://gallica.bnf.fr/ark:/12148/bpt6k857284>
- Ledoux et Paris*. (1979). Commission municipale du Vieux Paris.
- Lilla, M. (2014). *New french thought: political philosophy*.
- Lincourt, M. (1999). *In search of elegance: towards an architecture of satisfaction*. Montreal & Kingston ; Ithaca : Liverpool: McGill-Queen's University Press ; Liverpool University Press.
- Lowenthal, D. (2013). *The past is a foreign country - revisited* (Revised and updated edition). Cambridge: Cambridge University Press.

- MacDougall, E. B., Society of Architectural Historians, & Center for Advanced Study in the Visual Arts (U.S.) (Eds.). (1990). *The Architectural historian in America: a symposium in celebration of the fiftieth anniversary of the founding of the Society of Architectural Historians*. Washington : Hanover: National Gallery of Art ; Distributed by the University Press of New England.
- Malnar, J. M., & Vodvarka, F. (1992). *The interior dimension: a theoretical approach to enclosed space*. New York: Van Nostrand Reinhold.
- Marková, I., & Gillespie, A. (Eds.). (2012). *Trust and conflict: representation, culture and dialogue*. Hove, East Sussex ; New York: Routledge.
- Matthews, R. K. (1986). *The radical politics of Thomas Jefferson: a revisionist view* (1. paperback print). Lawrence, Kan: Univ. Press of Kansas.
- McCormick, T. J. (1990a). *Charles-Louis Clérisseau and the genesis of neo-classicism*. New York, N.Y. : Cambridge, Mass: Architectural History Foundation ; MIT Press.
- McLaughlin, J. (1988). *Jefferson and Monticello: the biography of a builder* (1st ed). New York: H. Holt.
- Mehaffy, M. (2006). Meaning and the Structure of Things. *Katarxis*, 3. Retrieved from http://www.katarxis3.com/Mehaffy_Meaning.htm
- Merleau-Ponty, Maurice | Internet Encyclopedia of Philosophy. (n.d.). Retrieved May 28, 2019, from <https://www.iep.utm.edu/merleau/>
- Merriam-Webster Inc. (1995). *Merriam-Webster's Medical Dictionary*. Merriam-Webster.

- Monticello: 2nd version (west elevation), verso, [1803], by Robert Mills. N154; K155
 [electronic edition]. (n.d.). Retrieved October 8, 2018, from
http://www.masshist.org/thomasjeffersonpapers/doc?id=arch_N154verso
- Morgan, D. (Ed.). (2010). *Religion and material culture: the matter of belief*. London ;
 New York: Routledge.
- Moustakas, C. (1994). *Phenomenological Research Methods*. SAGE.
- Moyn, S. (Ed.). (2015). *Global intellectual history*. New York, NY: Columbia Univ. Pr.
- Norberg-Schulz, C. (1980). *Genius loci: towards a phenomenology of architecture*. New
 York: Rizzoli.
- Norberg-Schulz, C. (1965). *Intentions in architecture*. Place of publication not identified:
 MIT Pr.
- Norberg-Schulz, C. (1985). *The concept of dwelling: on the way to figurative
 architecture*. [Milan] : New York: Electa ; Rizzoli.
- Onians, J. (1988). *Bearers of meaning: the classical orders in antiquity, the Middle Ages,
 and the Renaissance*. Princeton, N.J: Princeton University Press.
- Onuf, P. S. (2007). *The mind of Thomas Jefferson*. Charlottesville: University of Virginia
 Press.
- Pallasmaa, J. (2009). *The thinking hand: existential and embodied wisdom in
 architecture*. Chichester, U.K: Wiley.
- Pérouse de Montclos, J.-M. (1974). *Étienne-Louis Boullée (1728 - 1799): theoretician of
 revolutionary architecture* (1. print). New York: Braziller.

Pérouse de Montclos, J.-M. (2013). *L'architecture à la française: du milieu du XVe siècle à la fin du XVIIIe siècle*. Paris: Picard.

Phenomenology Research Overview - Center for Innovation in Research and Teaching.

(n.d.). Retrieved April 14, 2019, from

https://cirt.gcu.edu/research/developmentresources/research_ready/phenomenology/phen_overview

Pinker, S. (2018). *Enlightenment now: the case for reason, science, humanism, and progress*. New York, New York: Viking, an imprint of Penguin Random House LLC.

Plummer, H. (2009). *The architecture of natural light*. New York : London: Monacelli Press ; Thames & Hudson.

Purkhardt, S. C. (1993). *Transforming social representations: a social psychology of common sense and science*. London ; New York: Routledge.

Quimper, M. des beaux-arts de la ville de. (n.d.). Jean-Simon Berthelemy Le Lever du Soleil sur le char de l'Aurore. Retrieved April 29, 2019, from Musée des beaux-arts de la ville de Quimper : Site Internet website: <http://www.mbaq.fr/fr/nos-collections/ecole-francaise-des-17e-et-18e-siecles/jean-simon-berthelemy-le-lever-du-soleil-sur-le-char-de-l-aurore-339.html>

Rabreau, D. (1995). Mythologie et art poétique. L'Antiquité dans la théorie de l'architecture régénérée de Ledoux. *Dix-Huitième Siècle*, 27(1), 269–284.

<https://doi.org/10.3406/dhs.1995.2052>

Raglan, Lord. (1964). *The Temple and the House*. Routledge and Kegan Paul.

Rapoport, A. (1990). *The meaning of the built environment: a nonverbal communication approach*. Tucson: University of Arizona Press.

Reconstruction as a Treatment and Standards for Reconstruction—Technical Preservation Services, National Park Service. (n.d.). Retrieved October 24, 2018, from <https://www.nps.gov/tps/standards/four-treatments/treatment-reconstruction.htm>

Rehabilitating Interiors in historic buildings: Identifying and preserving character-defining elements. (1988). Washington D.C.: Technical Preservation Services, National Park Service, U.S. Dept. of the Interior.

REQUALLO - Phenomenology Glossary. (n.d.). Retrieved April 26, 2019, from http://onlineqda.hud.ac.uk/_REQUALLO/FR/Phenomenology_glossary.php

Rhodes, R. F. (1995). *Architecture and meaning on the Athenian Acropolis*. Cambridge ; New York: Cambridge University Press.

Rice, H. C. (1976). *Thomas Jefferson's Paris*. Princeton, N.J: Princeton University Press.

Rousseau, J.-J. (n.d.). Discourse on the Arts and Sciences (I. Johnston, Trans.). Retrieved April 25, 2019, from https://ebooks.adelaide.edu.au/r/rousseau/jean_jacques/arts/rstl.1671.pdf. (n.d.). Retrieved from

<https://royalsocietypublishing.org/doi/pdf/10.1098/rstl.1671.0072>

Rybczynski, W. (2013). *How architecture works: a humanist's toolkit* (First edition). New York: Farrar, Straus and Giroux.

Rykwert, J., & Schezen, R. (2000). *The villa: from ancient to modern*. New York: H.N. Abrams.

- Sammut, G. (Ed.). (2015). *The Cambridge handbook of social representations*.
Cambridge: Cambridge Univ. Press.
- Scully, V. (1991). *Architecture: the natural and the manmade* (1st ed). New York: St. Martin's Press.
- Seeing History | Langlois et Seignobos. (n.d.). Retrieved October 8, 2018, from
<https://www.umass.edu/wsp/history/outline/langlois.html>
- Semes, S. W. (2004). *The architecture of the classical interior*. New York: W.W. Norton.
- Smick, J. (2017). The Verwindung of Secular Philosophy in Luc Ferry and Jean-Luc Marion. *The Journal of Scriptural Reasoning*, 13(1). Retrieved from
<http://jsr.shanti.virginia.edu/back-issues/vol-13-no-1-june-2014-phenomenology-and-scripture/the-verwindung-of-philosophy-in-luc-ferry-and-jean-luc-marion/>
- Smith, D. W. (2018). Phenomenology. In E. N. Zalta (Ed.), *The Stanford Encyclopedia of Philosophy* (Summer 2018). Retrieved from
<https://plato.stanford.edu/archives/sum2018/entries/phenomenology/>
- Sprinkle Jr., J. H. (n.d.). Fiske Kimball's National Park Service Memoir. Retrieved from CRM: The Journal of Heritage Stewardship, Volumes 1-8 website:
<https://www.nps.gov/CRMjournal/Summer2010/article.html>
- Stuart, J., Revett, N., & Salmon, F. (2008). *The antiquities of Athens*. New York: Princeton Architectural Press.
- Summerson, J. (1980). *The classical language of architecture* (Rev. and enl. ed). London: Thames and Hudson.

Summerson, J. (1986). *The architecture of the eighteenth century*. New York, N.Y:

Thames and Hudson.

Thomas Jefferson - Online Library of Liberty. (n.d.). Retrieved April 25, 2019, from

<https://oll.libertyfund.org/people/thomas-jefferson>

Thomas Jefferson Foundation (Ed.). (2002). *Thomas Jefferson's Monticello*.

Charlottesville, Va.: Thomas Jefferson Foundation.

“Thomas Jefferson’s Architectural and Landscape Aesthetics: Sources and Meaning” -

Part 3 - UVA Alumni, Parents & Friends. (2015, May 18). Retrieved April 25, 2019, from Lifetime Learning website:

<https://alumni.virginia.edu/learn/2015/05/18/thomas-jeffersons-architectural-and-landscape-aesthetics-sources-and-meaning-part-3/>

Tilley, C. Y., & Bennett, W. (2004). *The materiality of stone*. Oxford ; New York: Berg.

Toadvine, T. (2019). Maurice Merleau-Ponty. In E. N. Zalta (Ed.), *The Stanford*

Encyclopedia of Philosophy (Spring 2019). Retrieved from

<https://plato.stanford.edu/archives/spr2019/entries/merleau-ponty/>

Van Schaik, L. (2008). *Spatial intelligence: new futures for architecture*. Hoboken, N.J:

Wiley.

Vidler, A. (1987). *The writing of the walls: architectural theory in the late enlightenment*.

Princeton, N.J: Princeton Architectural Press.

Vitruvius, & Granger, F. (1999). *On architecture:: in two volumes. 2: Books VI - X*

(Reprinted). Cambridge, Mass.: Harvard Univ. Press.

- Vitruvius, & Granger, F. (2002). *On architecture:: in two volumes. 1: Books I - V* (Reprinted). Cambridge, Mass.: Harvard Univ. Press.
- Walter-Karydē, E. (1998). *The Greek house: the rise of noble houses in Late Classical times*. Athens: Archaeological Soc. at Athens.
- Whitehill, W. M., Nichols, F. D., & Palladio, A. (Eds.). (1978). *Palladio in America*. New York: Rizzoli.
- Why Beauty Matters*. (n.d.). Retrieved from <https://player.vimeo.com/video/55784152>
- Winckelmann, J. J. (1987). *Reflections on the imitation of Greek works in painting and sculpture*. La Salle, Ill: Open Court.
- Winckelmann, J. J., & Appelbaum, S. (2010). *Winckelmann's images from the ancient world: Greek, Roman, Etruscan, and Egyptian* (Dover ed). Mineola, N.Y: Dover Publications.
- Winckelmann, J. J., & Potts, A. (2006). *History of the art of antiquity*. Los Angeles, Calif: Getty Research Institute.
- Wittkower, R. (1988). *Architectural principles in the age of humanism* (4th ed). London: Academy Editions.
- Wittkower, R., Connors, J., & Montagu, J. (1999). *Art and architecture in Italy, 1600-1750* (6th ed). New Haven: Yale University Press.
- Wolfe, C. (2015). *A Materialist Theory of the Self*. 9(1), 20.

Zangwill, N. (2014). Aesthetic Judgment. In E. N. Zalta (Ed.), *The Stanford*

Encyclopedia of Philosophy (Fall 2014). Retrieved from

<https://plato.stanford.edu/archives/fall2014/entries/aesthetic-judgment/>

Zeisel, J. (2006). *Inquiry by design: environment/behavior/neuroscience in architecture,*

interiors, landscape, and planning (Rev. ed). New York: W.W. Norton &

Company.