

Explication of Window as Heideggerian ‘Built-thing’

Milad Ghelichkhani

Submitted to the
Institute of Graduate Studies and Research
in partial fulfilment of the requirements for the degree of

Master of Science
in
Architecture

Eastern Mediterranean University
January 2018
Gazimağusa, North Cyprus

Approval of the Institute of Graduate Studies and Research

Assoc. Prof. Dr. Ali Hakan Ulusoy
Acting Director

I certify that this thesis satisfies the requirements as a thesis for the degree of Master of Science in Architecture.

Prof. Dr. Naciye Doratlı
Chair, Department of Architecture

I certify that we have read this thesis and that in our opinion it is fully adequate in scope and quality as a thesis for the degree of Master of Science in Architecture.

Assoc. Prof. Dr. Rafooneh Mokhtar Shahi Sani
Supervisor

Examining Committee

1. Prof. Dr. Hıfsiye Pulhan

2. Assoc. Prof. Dr. Shahin Keynoush

3. Assoc. Prof. Dr. Rafooneh Mokhtar Shahi Sani

ABSTRACT

Manifestly, window has always been regarded as the vital element to the feasibility of encompassing life within dwelling spaces owing to the inpouring of natural light and fresh air coupled with ocular connection to the other side of the wall. Besides, due to the contemporary prevalence of technological mind and the consequent calculative manner of man towards the built-things, typically modern window is transforming to extensive plates of glass which is merely devised to provide the maximum lighting, ventilation and energy efficiency within space. Whereas, significant literature indicates that within dwellings, light has turned into a mere quantitative matter and the hunger for the maximum intake of light has led to the loss of significance of window as a mediator between two worlds, between enclosed and open, interiority and exteriority, private and public, shadow and light. Having lost its ontological meaning, the window has turned into a mere absence of the wall. In this sense, the essence of ontological dimensions in dwelling has been widely investigated by various architectural theorists who mostly grounded their theoretical framework on philosophy of Heidegger as the originator of ontological notions within ‘dwelling’ and the factual essence of ‘built-thing’. Accordingly, various approaches have been put forward to give Heideggerian notions of dwelling a concretized architectural form; however, the essence of latent ontological dimensions of window as Heideggerian Built-thing seems to be overlooked in literature.

Within this framework, this study sheds new light on ontological dimensions of window as Heideggerian Built-thing. This thesis is believed to be a new attempt furthering the studies on disregarded dimensions of window. Extracting the conceptual

layers of built-thing through Heideggerian conception, outlines the contribution of this research within the body of existing literature on window. To attain the abovementioned, Heidegger's philosophical conceptions of 'built-thing' and his key hypothetical samples of it in daily life ('Hypothetical Jug' and 'Hypothetical Bridge') has been explicated through an inclusive structured literature survey. In this context, the synthesis of findings addressed six core conceptual layers defining window as a 'Hypothetical bridge' within a 'Hypothetical Jug' (dwelling), which grants 'ontological values' for dwelling through Poiesis. Consequently, to explore the presence of the extracted conceptual layers of window within actuality of architecture, sample study has been undertaken on designated samples which have been regarded as the representatives of two dialectical mindsets of technological mind and meditative thinking specifically toward the creation of window. The analysis of samples revealed that the presence of specific ontological dimensions within the extensive floor-to-ceiling window of 'Farnsworth House' seems debatable.

Keywords: Window, Built-Thing, Dwelling, Heideggerian Ontology, Hypothetical Jug, Hypothetical Bridge

ÖZ

Açıkcası pencere, doğal ışığın ve temiz havanın duvarın diğer tarafına gözle görülür bir bağlantı ile birleşmesiyle, konut sakinleri için hayatı kapsayan fizibilite açısından daima yaşamsal bir unsur olarak görülmüştür. Ayrıca, teknolojik akılın çağdaş yaygınlığı ve insanoğlunun yerleşiklere karşı hesaplama şekli nedeniyle, tipik modern pencere, sadece mekanda maksimum aydınlatma, havalandırma ve enerji verimliliği sağlamak üzere tasarlanmış kapsamlı cam tabakalarına dönüşüyor. Halbuki, önemli kaynaklarda, konutlar içinde ışığın sadece niceliksel bir meseleye dönüştüğünü ve azami ışık alımına açlığın, iki dünyanın arasındaki, kapalı ve açık, içsel ve dışsal, özel ve kamusal, gölge ve ışık arasındaki arabulucu olarak pencerenin önemini kaybetmesine neden olduğunu gösteriyor. Ontolojik anlamını yitiren pencere duvarın sadece yokluğuna dönüşmüştür. Bu anlamda, konutta ontolojik boyutların özü, çoğunlukla teorik çerçeveleri Heidegger'in felsefesi üzerine "konut" içindeki ontolojik düşüncelerin yaratıcısı ve "dahili" nin asıl özü üzerine dayanan çeşitli mimari kuramcılar tarafından geniş bir biçimde araştırılmıştır. Buna göre, Heideggerci kavramlarını somutlaşmış bir mimari biçim olarak vermek için çeşitli yaklaşımlar öne sürülmüştür; bununla birlikte, Heideggerci Built-thing olarak pencerenin gizli ontolojik boyutlarının özü literatürde gözden kaçırılmış gibi görünüyor.

Bu çerçevede, bu çalışma Heideggerci Built-thing olarak pencerenin ontolojik boyutları üzerine yeni ışık tutmaktadır. Bu tezin, pencerenin göz ardı edilen boyutlarıyla ilgili çalışmaların çığır açıcı bir ilerlemesi olacağına inanılıyor. Built-thing'in kavramsal katmanlarını Heideggerci anlayışla çıkarmak, bu araştırmanın penceredeki mevcut literatür bünyesindeki katkısını özetlemektedir. Yukarıda

belirtilenleri elde etmek için, Heidegger'in "built-thing" felsefi kavramları ve onun günlük hayattaki temel varsayımsal örnekleri ('Kuramsal Testi' ve 'Kuramsal Köprü') kapsayıcı bir yapılandırılmış literatür araştırması aracılığıyla açıklanmıştır. Bu bağlamda, bulguların sentezi, pencereyi, Poiesis'teki konut için "ontolojik değerler" veren bir 'Kuramsal Testi' (konut) içinde pencereyi 'Kuramsal Köprü' olarak tanımlayan altı temel kavramsal katmana değindi. Sonuç olarak, mimarinin gerçekliği içinde çıkarılmış kavramsal pencere katmanlarının varlığını keşfetmek için, örnek olarak, pencere yaratmaya yönelik olarak teknolojik zihnin ve meditatif düşüncenin iki diyalektik zihniyet setinin temsilcisi olarak görülen örnek çalışmalar üzerinde örnek çalışma yapılmıştır. Örneklerin analizi, 'Farnsworth Evi'nin geniş tabanından tavanına, penceresinde spesifik ontolojik boyutların varlığının tartışılabilir olduğu ortaya çıkardı.

Anahtar Kelimeler: Pencere, Built-Thing, Konut, Heideggerci Ontoloji, Kuramsal Testi, Kuramsal Köprü

DEDICATION

*To the dweller of my being
who opened the window of felicity
to the desperate Flâneur
who used to be imprisoned within his thrownness in the world*

ACKNOWLEDGMENT

First, I would like to extend my sincere gratitude to my thesis supervisor, Assoc. Prof. Dr. Rafooneh M. Sani and thank her for understanding, advising and encouraging me throughout the process of writing this thesis, I am indeed grateful.

Besides my supervisor, I would like to thank the rest of my thesis committee: Prof. Dr. Hifsiye Pulhan, Assoc. Prof. Dr. Shahin Keynoush, and Assist. Prof. Dr. Badiossadat Hassanpour, for their insightful comments and encouragement which incited me to widen my research from various perspectives. In addition, I would like to thank all professors which I owe my knowledge related to architecture, research and academia to them specifically Prof. Dr. Yonca Hürol and I would also extend my appreciation to Prof. Dr. Özgür Dinçyürek, Prof. Dr. Sadiye Müjdem Vural and Assoc. Prof. Dr. Ayşe Banu Tefvikler who gave me the opportunity to be part of my beloved Academic family as a research assistant.

Foremost, I wish to express my thanks to my parents, who have encouraged and supported me in all my endeavors. Likewise, I'm beholden to my two lovely angels of my life, Sara and Raha who have always had faith in me and I will not forget their self-devoting support in finalization of this work in every possible way. Last but not the least, I would like to thank my true friends, Kamiar Yazdani, Amin Youns, Kerem Özer Haman Asadi and Mohamad Einieh who stood next to me, listened me and giving valuable advices helped me along my journey.

TABLE OF CONTENTS

ABSTRACT.....	iii
ÖZ	v
DEDICATION	vii
ACKNOWLEDGMENT.....	viii
LIST OF TABLES	xiii
LIST OF FIGURES	xiv
1 INTRODUCTION	1
1.1 Problem Statement	2
1.2 Aim and Objective of the Study.....	2
1.3 Limitation of the Study	3
1.4 Research Methodology	4
1.5 Structure of the Thesis	5
2 VIEW ON ‘BUILT-THING’ BASED ON PHILOSOPHY OF HEIDEGGER.....	7
2.1 Heideggerian Theoretical Justifications on ‘Dwelling’	7
2.1.1 Heidegger’s Methodology.....	8
2.1.2 Concept of ‘Da-Sein’	10
2.1.3 The Situation of Perplexed Man	12
2.1.4 The Way of Thinking.....	14
2.1.5 Thinking and Dwelling	16
2.1.6 The Essence of Technology	17
2.1.7 ‘Meditative Thinking’ Against ‘Technological Mind’	19
2.1.8 Section Summary	22
2.2 Heidegger’s ‘Hypothetical Jug’	24

2.2.1	Concept of Nearness, Understanding Man's Daily Experience	24
2.2.2	Hypothetical Jug, Perception of Nothingness in Daily Life	25
2.2.3	Concept of 'Thingness' in 'Being-In-The-World'	26
2.2.4	The Fourfold; Enfoldment of Man's 'Being-In-The-World'	27
2.2.5	Concept of 'Gathering'; Nexus between Thingness and the Fourfold.....	32
2.2.6	Section Summary:	33
2.3	Heidegger's 'Hypothetical Bridge'	36
2.3.1	To Build, To Dwell	37
2.3.2	The Conceptual Layers of 'Hypothetical Bridge'	41
2.3.3	Section Summary	46
2.4	Chapter Summery	47
3	ONTOLOGICAL VALUES OF DWELLING IN PRIMITIVE HUT	49
3.1	Primitive Hut.....	49
3.1.1	Taking Refuge from Fickleness of Nature	50
3.2	Hard Core of Beauty	51
3.2.1	Ordinary Natural Way in Bringing Forth the Built-Thing	51
3.2.2	Materiality and Time.....	52
3.2.3	Staying Close To Things Themselves.....	53
3.2.4	Primitive Hut Gathers	53
3.2.5	Primitive Hut as Poiesis	54
3.2.6	Factual Relationship with the World.....	54
3.2.7	Silence	55
3.3	Protected Intimacy	57
3.3.1	Reverie; Augmentation of Physical Experience	59
3.3.2	Primitive Hut; Shelter for Reverie	60

3.3.3	Significance of Corners.....	61
3.3.4	Dim Vision, Experience of Reverie	62
3.3.5	Critics on Ocularcentrism and Domination of Eye	63
3.3.6	The Significance of Shadow	66
3.4	Chapter Summary	68
4	A THEORETICAL BACKGROUND ON ‘WINDOW’	70
4.1	Window as Element of Spatial Definition	71
4.1.1	Definition of Space	71
4.1.2	Openings and Space Definition.....	73
4.2	Significance of Window in Fundamentals of Design	82
4.2.1	Independent Role of Natural Components.....	83
4.2.2	Role of ‘Formation of Window’	86
4.3	Window Transitions through Timeline	89
4.3.1	Genesis of Window	89
4.3.2	Transformation of Window ‘From Ordinary to Modern’	91
4.4	Chapter Summery	94
5	INTERPRETATIONS AND ARGUMENTATIONS	96
5.1	Linking ‘Hypothetical Jug and Bridge’ To ‘Window’	96
5.1.1	Extracting ‘Conceptual Layers’ of ‘Dwelling and its Window’ as ‘Hypothetical Jug’	97
5.1.2	Extracting ‘Conceptual Layers’ of ‘Window’ as ‘Hypothetical Bridge’	105
5.1.3	Nexus between Jug and Bridge	114
5.2	The Role of ‘Window’ in Ontological Values of Dwelling.....	114
5.2.1	Window as ‘Poiesis’ Through Confronting Nature	115
5.2.2	Dialectics between Window and Dark Corners	116

5.2.3 Section Summary	118
5.3 Exploring the ‘Conceptual Layers’ of Window Trough Sample Study	120
5.3.1 Justifying the Criteria for Selecting Samples	120
5.3.2 Review on Designated Samples	121
5.3.3 Exploring the ‘Conceptual Layers’ in Designated Samples	137
6 CONCLUSION.....	155
REFERENCES.....	161

LIST OF TABLES

Table 1. Conceptual Links Between the ‘Hypothetical Bridge’ and The ‘Window’ In Dwelling; Swinging over Wall (by author).....	112
Table 2. Conceptual links between the ‘hypothetical Bridge’ and the ‘Window’ in Dwelling; Bringing together inside and outside (by author).....	112
Table 3. Conceptual Links Between The ‘Hypothetical Bridge’ And The ‘Window’ In Dwelling; Situating Man’s Immediate Experience In Connection With Both Sides Of The Boundary (by author).....	113
Table 4. ‘Conceptual Layers’ Beneath the Role of ‘Window’ In Ontological Values of Dwelling (by author).....	119
Table 5. Comparative Synthesis of Conceptual Layers of Windows Which Have Been Explored in Both Designated Samples (by author).....	154

LIST OF FIGURES

Figure 1: Grounding the theoretical framework	5
Figure 2. Structure of the Thesis Chapters.....	6
Figure 3. The Ontological Transformation Of Phenomenology By Heidegger (by author).	10
Figure 4. Structure OF Da-Sein (by author).	12
Figure 5. Man’s Endeavor Towards Thinking, is to Take Steps Beyond Metaphysics (by author).....	14
Figure 6. The Way Dwelling Makes Man Rooted to Being (by author).....	15
Figure 7. The Way of Thinking for Heidegger (by author).	16
Figure 8. The Way Man Has Lost His Ability to Dwell (by author).	17
Figure 9 the truth of technology is not technologic (by author).	18
Figure 10. The Truth of Technology (by author).....	19
Figure 11. the Windmill Awaits Wind’s Blowing While the Water Dam Imprisons Nature Forces (by author).	20
Figure 12. Calculative Thinking Eradicated Mysterious Dimensions of World (by author).....	21
Figure 13. Structure of Meditative Thinking towards Technological Mind (by author).	23
Figure 14. Hypothetical Jug, Perception of Nothingness in Daily Life (by author)..	26
Figure 15. Concept of 'Thing' (by author).....	26
Figure 16. Main Concerns of Technological Mind Towards Meditative Thinking (by author).	27

Figure 17. Heidegger Pouring Water in Jug From the Water Spring Near His Hut (The Charnel-House, 2014).	28
Figure 18. Interplay Of Solid, Beingness, And Void, Nothingness, as Genesis of Hypothetical Jug (by author).....	29
Figure 19. The Fourfold Encompassing Man's Immediate Experience by Dint of Jug's Outpouring Gift (by author).	30
Figure 20. Structure of the Fourfold Trought the Concept of 'Peras' (by author).....	33
Figure 21. structures and relations of Heideggerian conepts on 'Dwelling' (by author).	35
Figure 22. Two Modes of 'To Build' (by author).	37
Figure 23. Correlation of Build and Dwell in Daily life (by author).	39
Figure 24. Structure of Heidegger's 'Piety of Dwelling' (by author).....	40
Figure 25. The Bridge Swings Over Stream (by author).	42
Figure 26. The bridge brings together two sides of the stream 'bridge joins two solids by a solid within a void' (by author).....	42
Figure 27. Before the emergence of the bridge there are many indifferent spots along the river (by author).	43
Figure 28. The place of the bridge which brings together two sides of the river (by author).	44
Figure 29. The Bridge Situates Man's Immediate Experience in Connection with Two Sides of the Stream (by author).....	44
Figure 30. The Bridge 'Holds Up' the one who crosses it (by author).	45
Figure 31. holistic review of structures and interrelations of the concepts grounded on Heideggerian notions of 'dwelling' and 'Built-Thing' (by author)	48
Figure 32. Man taking refuge from fickleness of nature (by author).....	50

Figure 33. 'Primitive hut' as an ontological response to dialectical relation of man and nature (by author).....	51
Figure 34. Appreciation of Time Passage through the Aging of Materials within Space (by author).....	52
Figure 35. Thrownness of Man into being (by author).....	55
Figure 36. In Our Reveries House is a Large Cradle (by author).....	57
Figure 37. Protected Intimacy by Henry Moore OM (Moore, 1996).....	58
Figure 38. Man roots in a corner of the world day by day (by author).....	62
Figure 39. Significance of Shadow (by author).....	67
Figure 40. Ontological Values of Dwelling in Primitive Hut (by author).....	69
Figure 41. Different Effects of Openings on 'Degree on enclosure' in Spatial Fields (Ching, 2015)	75
Figure 42. Full Enclosure of Spatial Field (Ching, 2015).....	75
Figure 43. Illustration of Spatial Field, 'Full Enclosure' (by author).....	76
Figure 44. Openings within Planes (Ching, 2015).....	76
Figure 45. Illustration of Spatial Field, 'Opening within Plane' (by author).....	77
Figure 46. Openings at Corners of Planes (Ching, 2015)	77
Figure 47. Illustration of Spatial Field, 'Opening at Corner' (by author).....	78
Figure 48. Openings between Planes (Ching, 2015).....	78
Figure 49. Illustration of Spatial Field, 'Opening Between Planes' (by author).....	78
Figure 50. Transformation from Maximum Enclosure to Minimum (Ching, 2015) .	79
Figure 51. Illustration of Spatial Field, 'Window-wall' (by author).....	79
Figure 52. 'View' Changes during the Movement of Observer Relative to the Opening (by author).....	81
Figure 53. 'View' Changes during the Enlargement of Opening (by author).....	81

Figure 54. Impact of Light on Quality of Spatial Field (by author).....	82
Figure 55. As The Opening Enlarges the Two Fold Quality of Light Fades in Spatial Field (by author).....	82
Figure 56. Daily Variations in Shadow-Light Patterns within Space (by author).	84
Figure 57. Seasonal Variations of Solar Penetration (by author).....	84
Figure 58. Gradual domination of outside view through enlargement of the opening within plane (by author).	85
Figure 59. Ventilation (by author).	86
Figure 60. Fixed-glazing window (Randall, 2002)	87
Figure 61. Casement window (Randall, 2002)	87
Figure 62. Awning window (Randall, 2002)	87
Figure 63. Double hung window (Randall, 2002).....	88
Figure 64. Sliding window (Randall, 2002).....	88
Figure 65. Bay window (Randall, 2002).....	88
Figure 66. Skylight window (Randall, 2002).....	89
Figure 67. Jalousie window (Randall, 2002)	89
Figure 68. Ordinary Window in Primitive Hut (by author)	90
Figure 69. Crystal Palace: Emergence of New Conception of Window (by author). 92	
Figure 70. Farnsworth house, Upshot of utilizing modern window (by author).....	93
Figure 71. The Primordial Shelters of Human (by author)	98
Figure 72. 'Gub', Rainfall: Gift of divinities to mortal man (by author)	101
Figure 73. Origins of the term 'Window' (by author).....	103
Figure 74. Conceptual Links between 'Hypothetical Jug' and 'Dwelling and its Window' (by author)	104
Figure 75. The essence of 'poured gift' in 'Hypothetical Primitive Hut' (by author)	106

Figure 76. Window Swings over the boundary of primitive hut (by author).....	107
Figure 77. Window Brings Together Inside and Outside (by author).....	107
Figure 78. Window brings together inside and outside (by author).....	108
Figure 79. Window Brings Together Inside and Outside (by author).....	109
Figure 80. Window grants dwellers the perception of time passage (by author).....	109
Figure 81. The Place of Window (by author)	110
Figure 82. Window Situates Man's Immediate Experience in Connection with inside and outside (by author).....	110
Figure 83. Window determines man's understanding of the other side of the wall in relation to it (by author)	111
Figure 84. Nexus between Jug and Bridge (by author).....	114
Figure 85. Window's inpouring ontological response to dweller's twofold contradictory needs in relation to nature (by author)	115
Figure 86. Window's outpouring ontological response to dweller's twofold contradictory needs in relation to nature (by author)	116
Figure 87. Dialectics between Window and Dark Corners (by author).....	117
Figure 88. Criteria for Selecting Samples (by author)	121
Figure 89. Ann Cline's Primitive Hut (Cline, 1997).	122
Figure 90. Ann Cline's Childhood Tree House (by author)	124
Figure 91. The way to the entrance of Cline's primitive Hut (Cline, 1997).....	124
Figure 92. Primitive Hut; West Section (by author)	125
Figure 93. Primitive Hut; South Section (by author)	125
Figure 94. Initially, Cline made a simple 48 square feet platform and sat on it (by author)	126

Figure 95. The first rain came and consequently the first response to it revealed as the act of building a pitched roof on 4 corner columns (by author).....	127
Figure 96. The widow Cline allocates for his essential routine objects (Cline, 1997)	128
Figure 97. The skylight window shaping the routine of tea backstage (Cline, 1997)	129
Figure 98. Mies van der Rohe's Farnsworth House; interior view (Clemence, 2006)	130
Figure 99. Mies van der Rohe's Farnsworth House; view from outside (Clemence, 2006)	131
Figure 100. Farnsworth House; an open space sandwiched between two horizontal slabs intertwined with surrounding nature (by author)	132
Figure 101. Farnsworth House; a minimalistic single-space box in which the interior space is surrounded merely by large floor-to-ceiling glass window walls. (Clemence, 2006)	132
Figure 102. Farnsworth House; interior view (Clemence, 2006).....	133
Figure 103. Intensive Transparency in Farnsworth House (Clemence, 2006).....	133
Figure 104. Farnsworth House; Spatial organization (Clemence, 2006)	134
Figure 105. The huge black maple tree providing cooling shadow for inhabitants (Clemence, 2006)	135
Figure 106. The Farnsworth house has been flooded considerably twice till now (Clemence, 2006)	136
Figure 107. 'Conceptual layers' of windows which has been explored in samples (by author).	138

Figure 108. The Window of Primitive Hut Swings over wall through not disrupting the role of the bounds of shelter by dint of ‘Peras’ (by author)	140
Figure 109. The Windows of Farnsworth House Interrupts the essence of shelter due to lack of crusted shell (by author).....	141
Figure 110. The Window of Primitive Hut Brings Together Inside and Outside in the way that hints man his lack of control over natural forces beyond (by author).....	142
Figure 111. Due to the Concept of ‘Safe Danger’ The Windows of Farnsworth fail to gather the fourfold as a built thing due to the lack of divinities (by author).....	143
Figure 112. The Window of Primitive Hut brought about concretization of space through daily use (by author)	144
Figure 113. The Windows of Farnsworth Fails to bring about place of window due to being surrounded by monotonous sensory patterns (by author)	145
Figure 114. The Window of Primitive Hut lets dweller to see the outside while he is embraced in the arms of the concrete shelter by dint of ‘Peras’ (by author)	146
Figure 115. the dweller inside is intrusively and unceasingly showing off self to the surrounding nature (by author)	147
Figure 116. The Window of Primitive Hut determines dweller’s ocular connection to the outside in relation to itself (by author).....	148
Figure 117. In Farnsworth the ocular connection of dweller to the outside is independent from window (by author).....	149
Figure 118. Window’s ontological response to dweller’s twofold contradictory needs in relation to nature through inpouring and outpouring (by author)	150

Chapter 1

INTRODUCTION

Imagine the deep darkness of night while you are standing in the middle of a cold street gazing at the window of a house which reveals itself as a canvas filled with warmth and light. The gentle candle which is just providing light for the dweller inside to make a warm soft embrace and resists to show off its glowing essence to the gloomy sky. This glowing window is the metaphor for the open eyes of the dweller who is awake. However, the framing of the window is not letting you to see everything which is happening inside. The house is like a mother embracing the baby (dweller) in her arms, protecting not displaying what's inside.

Here, the window is an ontic being as a living threshold between two worlds of twofold qualities of light and shadow. This window is a bounded being. It is not trespassing the dark nature of night through extension of its surface. This constraint of the window frame is protecting the mysteries inside the dwelling and at the same time telling you that there exist some mysteries which you cannot reach them till you are an outsider. This is how this window is creating a kind of uncanny or “unheimlich” depth in the house.

Window has always been considered as one of the most crucial elements of architecture, in the way that lack of this element causes the inability of space to encompass life within. These days with the high speed of technological improvements

of architectural elements the vital factors of windows are being considered as lighting, ventilation and energy efficiency. In this sense, the hunger for the maximum intake of light has become the determining factor in creation of window and led to prevalence of extensive floor-to-ceiling windows.

1.1 Problem Statement

In spite of the increasing efficiency of modern windows owing to the improvements of construction techniques and material industry in modern architecture specifically the application of large plates of glass, considerable literatures indicate that parallel with the domination and prevalence of technology, modern window has lost its ontological dimensions and has tuned into a mere absence of wall (Pallasmaa, 1996). This, caused the loss of specific ontological values in dwelling such as ‘protected intimacy’ (Bachelard, 1994, Zumthor, 1998).

Regarding the abovementioned, many studies has been done in order to extract and translate the underlying concepts of dwelling into tangible architectural language, specifically grounded on philosophical concepts of Heidegger on the essence of ‘dwelling’ (Sharr, 2007). In spite of that, there’s lack of sufficient literature explicating the latent ‘conceptual layers’ of window based on Heideggerian notions of ‘dwelling’ and exploring their actuality in daily life experience of architecture.

1.2 Aim and Objective of the Study

This thesis is an endeavor to shed light on the latent ontological dimensions of window which are exposed to vanish in today’s dwellings due to the domination of technological mind. This research outlines a novel approach to the essence of window as Heideggerian built-thing. In this sense, it is believed that, this study broadens the current conception of window in dwellings; and is beneficial specifically for the

architects who are dealing with the design of openings. With this purpose in mind, this study seeks to address the following objectives:

- deriving the latent ‘conceptual layers’ of window as Heideggerian built-thing through explication of Heidegger’s notion of dwelling;
- Exploring those ‘conceptual layers’ within actuality of architecture.

Accordingly, the following questions are tackled:

- What are the latent ‘conceptual layers’ of window as Heideggerian ‘built-thing’ underlying the ontological dimensions of ‘dwelling’?
- What are the traces of these ‘conceptual layers’ of window in actuality of today’s architecture?

1.3 Limitation of the Study

This study is a decryption of the latent dimensions of ‘window’, fundamentally grounded on the philosophical orientations of Martin Heidegger on the essence of ‘dwelling’ and the way he conceptualizes the ‘built-thing’. Accordingly, any other approach to window like economical, structural or technological efficiency aspects, is out of the scope of this research. In this regard, in line with Heideggerian orientation on ‘meditative thinking’ against the prevailing ‘technological mind’, the focus of this thesis in sample studying is on exploring the latent conceptual layers in two distinct contradictory modes of window as the representatives of two modes of thinking, one, a modest opening in a primitive hut and the other, modern large floor-to-ceiling plates of glass surrounding a contemporary residential glass box. The criteria for selecting the samples are attentively described in the 5.3.1 section. Accordingly, this study is not an interpretation of all types of windows within all the architectural styles and approaches.

1.4 Research Methodology

In order to conceptualize ontological dimensions of ‘built-thing’ within Heideggerian philosophy of ‘dwelling’, a qualitative approach is conducted to attain the objectives of this research. An inclusive literature survey has been undertaken in three sections. Firstly, an analysis of existing literature on Heidegger’s philosophical conceptions of ‘built-thing’ and its respective hypothetical samples in daily life (hypothetical jug and bridge) is done to make a clear manifestation of Heideggerian ‘Built-Thing’. To realize this goal Adam Sharr’s ‘Heidegger for architects’ has been an essential source to apprehend Heideggerian notions through an architectural approach. Secondly, in line with Heidegger’s idea of ‘nearness’, two significant ontological values of dwelling which have been raised by foremost literature, are reviewed; the ‘Protected Intimacy’ (Bachelard, 1994) and ‘Hard Core of Beauty’ (Zumthor, 1998). As the final section of literature survey, this study gives general panorama of theoretical background on window through three main scopes of ‘Spatial Definition’, ‘Design Principles’ and ‘Transitions through Time’. In order to clarify the concepts, a set of analytical sketches by author, are coupled with abovementioned literature surveys. Afterwards through logical argumentation, the latent conceptual layers of Heideggerian ‘Built-Thing’ are extracted and linked to ‘conceptual layers’ of window. Finally, in the last step, the ‘Conceptual Layers’ of Window have been explored in actuality of architecture through Sample Study. The abovementioned has been illustrated bellow (Figure 1).

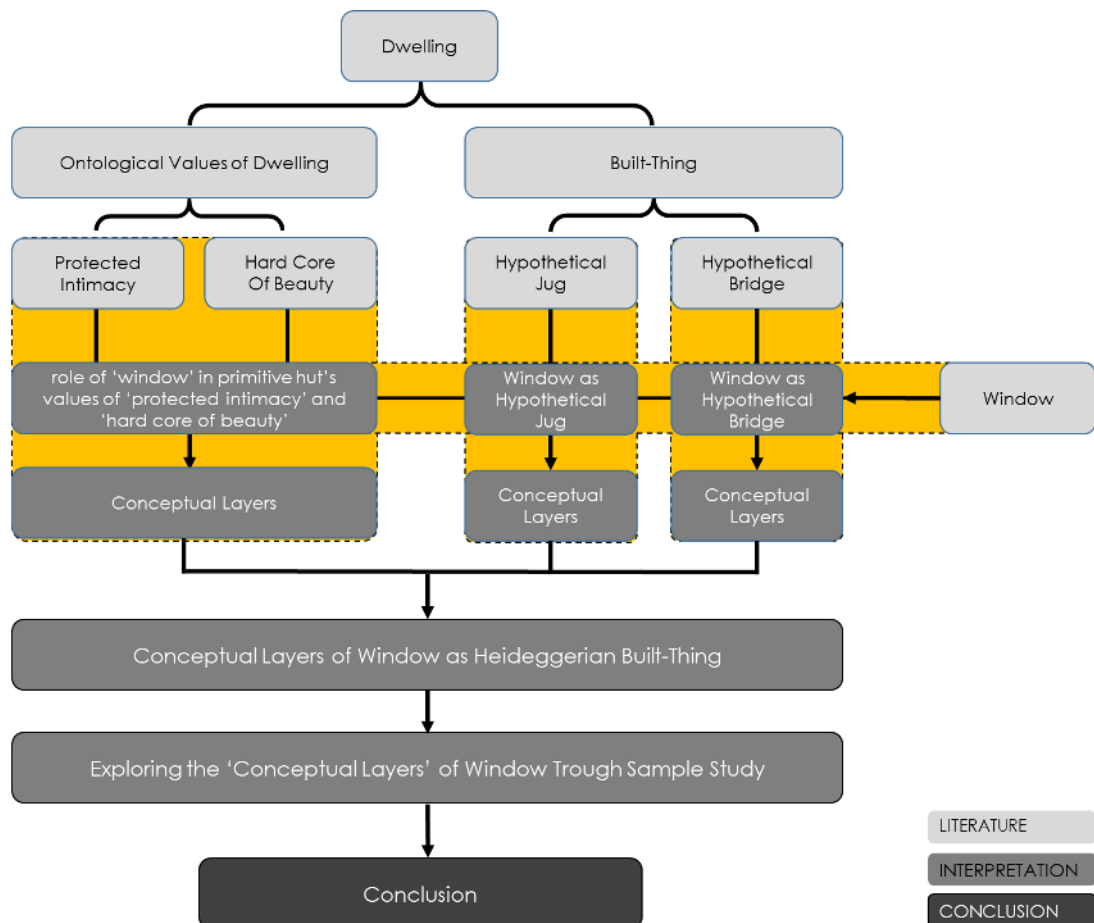


Figure 1: Grounding the Theoretical Framework

1.5 Structure of the Thesis

The following (Figure 2) is the illustration of the structure of thesis and the main concepts in each chapter.

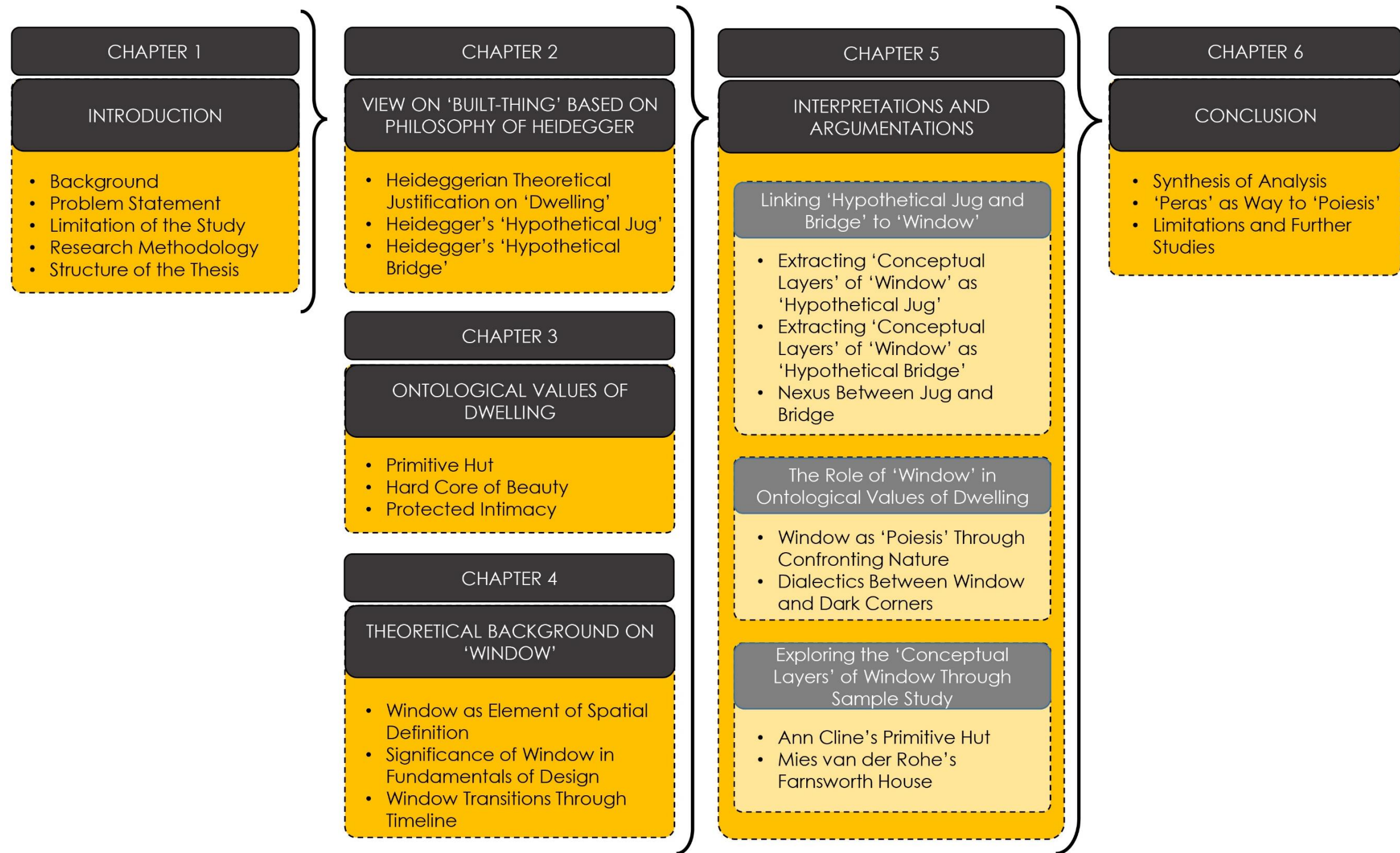


Figure 2. Structure of the Thesis Chapters

Chapter 2

VIEW ON ‘BUILT-THING’ BASED ON PHILOSOPHY OF HEIDEGGER

This chapter of the study will deal with conceptualizing the view on ‘Built-thing’ based on philosophy of Heidegger. The following chapter achieves this through four main sections. The first section carries out a review on the main theoretical justification of Heidegger on ‘Dwelling’. Meanwhile in this sense, Heidegger’s definition of ‘Meditative thinking’ has been interpreted towards the contemporary ‘technological mind’. Within the second and the third section, two key hypothetical models of Heidegger (Hypothetical Jug and Hypothetical Bridge) will be studied in order to deduce the ‘Conceptual Layers’ of ‘opening’ within the ‘primitive hut’ in the chapter 5, which fits Heideggerian Definition of ‘Built-thing’. The fifth section of this chapter, links the ‘hypothetical models’ (Jug and Bridge) to the ‘hypothetical primitive hut’ and its respective ‘opening’. Consequently, the ‘Conceptual Layers’ of ‘opening’ based on Heidegger’s ‘Dwelling’, will be derived.

2.1 Heideggerian Theoretical Justifications on ‘Dwelling’

Being and Time by Heidegger is a phenomenological study on the question of Being itself. This book is an endeavor to dis-cover the concrete meanings lying beneath the mere being. That is to say, rather than questions such as: why we are in this world? Or were we coming from? Heidegger’s main concern was the way contemporary man is facing with the question of being. Thereby he brings up the question of being as the fundamental question of philosophy or as in his own words ‘the fundamental

ontology'. His fundamental ontology is an interpretation of time, as a transcendental horizon, inside the boundaries of being. That is why he titled his book 'being and time'.

Heidegger studies on being through his own phenomenological methodology. According to Richardson (2011) Heidegger justifies his preference of methodology by explaining that it is impossible to prove the being through a scientific methodology so he brings up praxis for the opposite of it, nothingness. to make it clear: he discusses on an empty hypothetical jug in which scientifically can never be stated that the jug is empty, it is always filled with something, even if the whole fluid inside is poured out it is still filled with molecules floating within air.

That is to say, science is unable to understand emptiness (nothingness) while jug's empty state is tangible to people and they use it through their daily life. In view of that, Michael Murray (1978) interprets that Heidegger argues on this inability of science on describing the reality of being of things as touched by man in everyday life. Consequently, being is something that reveals itself to us.

2.1.1 Heidegger's Methodology

As claimed by Richardson (2011) Heidegger owes the foundations of his ontological phenomenology to his mentor Edmund Husserl however Heidegger's own synthesize on grounds of phenomenology brought a kind of transformation to it, still a concise review is notably beneficial to this study. Following is a brief summary on Husserlian notions of phenomenology based on Dermot Moran's (2014) 'introduction to phenomenology'

Phenomenology of Husserl

According to Husserl, phenomenology is the endeavor of revealing the structures of consciousness through the experience of a first person point of view. He declares that

consciousness has an oriented essence which is always gravitating to things. Therefore, phenomenology is returning back to things themselves. In that sense, it is to discover the immediacy of lived experiences, in his words 'Lebenswelt', the lifeworld. Phenomenology is to discover the phenomenon as it reveals itself to our consciousness, within the instantaneous factual experience of reality which is not detached from our being. In contrast with Cartesian separation of Subject and object, Husserlian phenomenology is based on the unification of object/subject as interlocked unities. The structure of consciousness is the consequence of immediate apprehension of phenomenon which is attained through human intention. When human consciously directs his attention to a specific thing, he'll be able to gain a description of reality, although this is only possible by apprehending the assumptions and bracketing them (Dermot Moran's (2014).

Heidegger's Ontological Phenomenology

Back to Heideggerian version of phenomenology, to begin with, in line with David R. Cerbone (2014) in 'Understanding Phenomenology', the divergence between Husserlian and Heideggerian conception of phenomenology derives from their background in philosophy, in which unlike Husserl who was concerned with mathematics, Heidegger's fascination was theology.

But the concrete essence of phenomenology for Heidegger faces a fundamental metamorphosis which makes him distinguished from all metaphysicians before him. In his revolutionary turn in phenomenology he emphasizes on understanding human lived experience itself more than the study of phenomenon. Heidegger emphasizes on the difference between 'Sein', being and 'Seiende' beings, in order to justify being as his main concern. Accordingly, he reminds of the momentous issue that has been neglected by all metaphysicians before him, as the difference between 'Ontics' and

‘Ontology’ Cerbone (2014). In that sense, concerning ontology the question for Heidegger is ‘the way man situates his own being’ or in other words ‘what is man’s being on earth?’ To Heidegger this is the factual ontological question that man can face with.

Heidegger in his essay ‘Basic problems of phenomenology’ considers the word ‘phenomenology’ through etymology in order to attain its roots from two notions of ‘phenomena’ (to show, to emerge, to reveal) and ‘logos’ (ability, logic, way). In this way phenomenology is defined as the practice of letting a hidden thing to show itself to us through a methodology, or to put it simple phenomenology is an ‘unconcealment’. For Heidegger ‘being’ itself is hidden or forgotten and his fundamental phenomenology is the only way to appreciate it. That is to say being is the most fundamental notion but not the most apparent one.

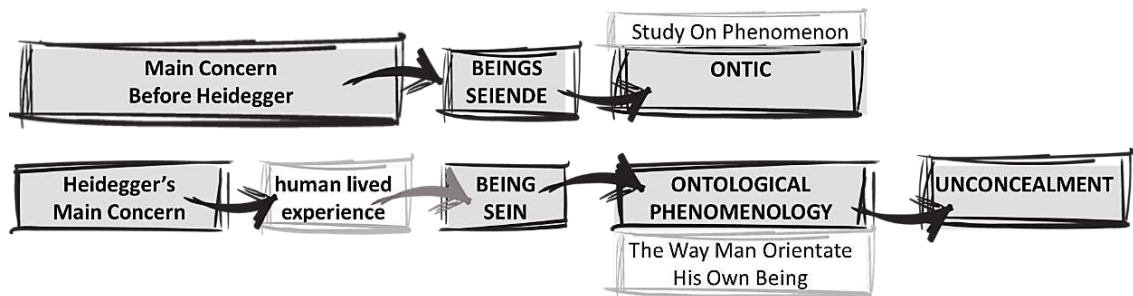


Figure 3. The Ontological Transformation of Phenomenology by Heidegger (By Author)

2.1.2 Concept of ‘Da-Sein’

Having said that, for Heidegger, man is the only being (Seinde) who has the ability of bringing forth as human by dint of his being (Seina). In other words, man reveals himself to his own self in the shape of human-beings by virtue of his being. Also he notes that revealment of the being is the only way for man to authenticate his being on

earth (Braver, 2014). Accordingly, man's being is within constant self-world discovery during all the lifetime, rather than an abrupt formation of self. So that is to say, being of man is interlocked with time and unceasingly transformation.

Continuing on this line, as David Cerbone (2008) construes, Heidegger broaches the novel term, Da-Sein (Da: there, Sein: being), which is describing that man is the only being (Seinde) who brings up the question of being (Seina). In this sense, Dasein, there-being, is an experience of being which is merely experienced by human. Accordingly, Heidegger deduces that Dasein is the guardian of being (Cerbone, 2008). Here, it is important to note that Dasein is not the human itself, but it is, in the essence, a constant becoming in human.

In continue, Heidegger describes that his intention in using Da in Dasein is referring to a situation of unconcealment or disclosure in being. Put differently, in the words of Lee Braver (2014) in 'Heidegger: Thinking of Being', Dasein is the situation of apprehending the being in human. Accordingly, he explains that Dasein is an existence, but not similar to the existence of other beings. Alternatively stated by Walter Brogan (2005), Dasein is an existential structure, rather than categorical. For instance, Dasein is thrown into the world.

Thus Dasein is a being (Seinde) who is in constant comprehension of being and simultaneously has twofold value of ontic and ontological (Braver, 2014). In this regard Heidegger brings up his fundamental ontology and criticizes the metaphysicians since they completely forgot this fundamental question of being. He condemns them on concentration on Ontics rather than ontological.

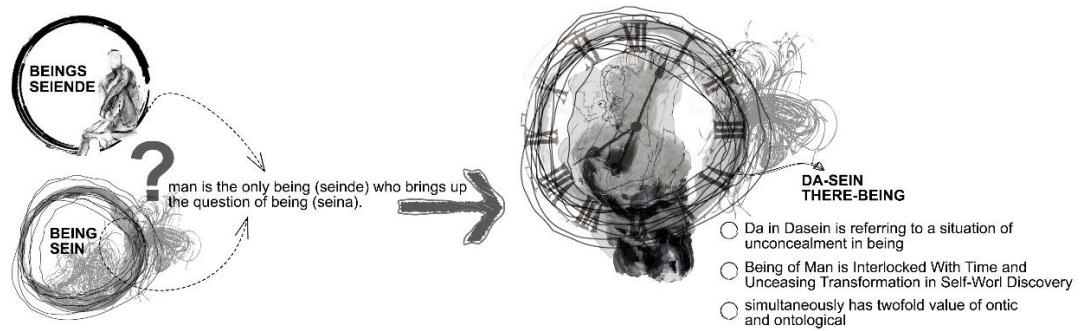


Figure 4. Structure of Da-Sein (by author)

2.1.3 The Situation of Perplexed Man

In this sense, he begins his book 'Being and Time' by criticizing contemporary man's inadequate conception of being through interpreting a quote from Plato's book, *Sophist*, as follows: "For manifestly you have long been aware of what you mean when you use the expression "being." We, however, who used to think we understood it, have now become perplexed." (Plato, *Sophist*, 244a)

Firstly, the question arises here is why Heidegger broaches this quote from Plato in the beginning of his discussions? David Cerbone (2008) in 'Heidegger: A guide for the perplexed' attempts to shed light on this. The first thing to mention is that most of Plato's arguments do not lead to a solution or in other words, it brings on an *Aporia* to the end of his arguments. But Heidegger refers to this *Aporia*, by using the word *perplexed*, just in the beginning of his book, in order to indicate that we are in the same situation of confusion with Plato's era in understanding the being. In this regard, Heidegger refers to human's embarrassment in confronting with his inability to discover the being, the being which concealed itself while phenomenology to Heidegger is the methodology to unconcealment.

In view of this, Michael Watts (2014) infers that to Heidegger the roots of philosophy are basically in western history and Greek thinking. Heidegger asserts that philosophy is in fact metaphysics; which is concerned with the being of beings. In this sense, Heidegger in his book 'Introduction to metaphysics' emphasizes that philosophy took its roots in Platonism and in that vein; he refers to Nietzsche as the last metaphysician of history, who tries to overturn the dominant Platonism in philosophy. So he introduces himself as a post Platonist. In that regard, Heidegger in his essay 'The end of philosophy and the task of thinking' refers to the question, are we talking about the end of philosophy?

As maintained by Dominique Janicaud (1995), Heidegger interprets the meaning beneath the term 'end' and argues that by ending it means to complete, rather than termination, nevertheless to complete doesn't imply on perfection. Then Janicaud concludes that here the term 'end' refers to a situation which is the consequent summation of all possibilities, however this 'end' for philosophy is the 'initiation' of planetary civilization which is based on western thinking. Moreover, Heidegger declares that something is concealed in the history of metaphysics in which he gives an analogy to clarify: nothing can be seen in the middle of a forest which is filled with trees. In the middle of a world in which man is drown among the dense ocean of beings (seinde), the being itself is concealed (Sharr, 2010).

Thereby, the main concern for Heidegger is to search for the concrete essence of being which shaped metaphysics. Accordingly, he alludes that metaphysics is thrown out of being experience because of its Platonic essence which is merely considering beings rather than being itself (Watts, 2014). In this manner, Heidegger refers to the Nihilism in philosophy which is brought up by Nietzsche heretofore since metaphysician's

failure to distinguish the ontological difference between being (Sein) and beings (Seiende) (Cerbone, 2008).

2.1.4 The Way of Thinking

In light of this, Heidegger (1973) in his essay ‘What is called thinking?’, believes that the concrete ground in this issue is thinking. He reminds that man should think beyond the metaphysics which is only possible through an enlightening process. He condemns contemporary man on inability of thinking and seeks a way for man to learn how to think. Consequently, for Heidegger, man’s endeavor towards thinking, is to take steps beyond metaphysics and nihilism.

Moreover, in the words of Janicaud (1995) Heidegger believes that thinking beyond nihilism is not possible through any kind of Humanism, since any thinking involving humanism is ingrained in metaphysics and consequently neglecting Heidegger’s ontological difference. To Heidegger, humanism gave rise to a kind of transformation in mankind, to man’s state of homelessness in 21 centuries.

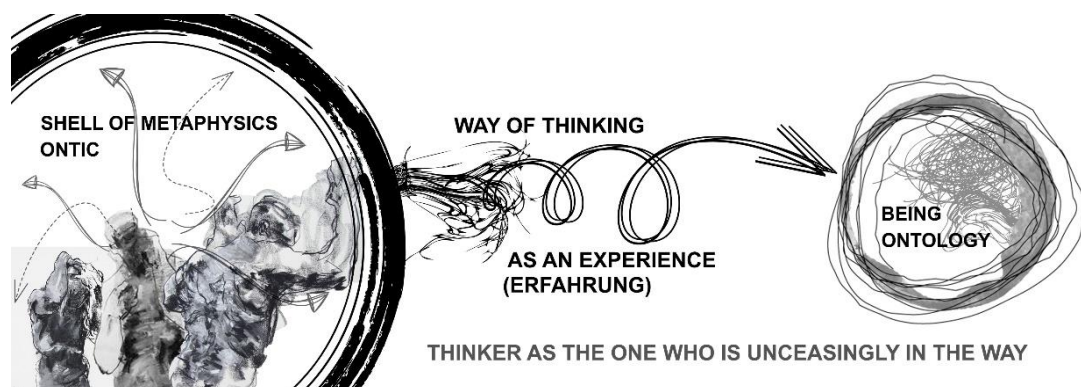


Figure 5. Man’s Endeavor towards Thinking, Is to Take Steps beyond Metaphysics (by author)

In this regard, Heidegger justifies two points: firstly, man is aware of his situation as mortal and the fact that he will die one day, so his death, non-being, is interlocked with

time. Secondly man knows that his existence is constrained on earth. Thus, Heidegger concludes that man's being depends on his dwelling on earth. In other words, dwelling is the particular characteristic of being (Barbaza, 2003). Dwelling makes man rooted to being, to the world.

In continue he discusses that man can build only by virtue of obtaining the capability of dwelling on earth. He defines building as bridging man to the fourfold constituents of cosmos. Heidegger discusses on relation between building, dwelling and thinking in his famous essay 'building, dwelling, thinking' which is considered in this study subsequently.

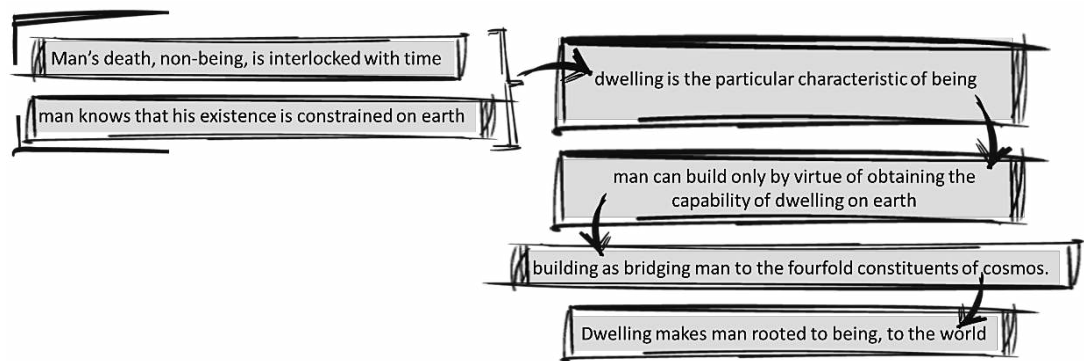


Figure 6. The Way Dwelling Makes Man Rooted to Being (by author)

Back to Heidegger's conception of thinking and his condemnation of contemporary man's inability to think, he notes the distinctive difference between thinking and though provoking hence he refers to the concrete question of, what is called thinking (Braver, 2014). In response, he underlines that the crux of the matter is what calls us to think. To clarify, based on Braver in 'Heidegger: Thinking of Being', the essence of thinking for Heidegger is experience. In this, the term he uses is 'Erfahrung' which is exactly the same as what Hegel employs in his phenomenology. The term 'Erfahrung' in essence, refers to walking a path which here for thinking means to attain

something in the way. In addition, for Heidegger acquiring knowledge is different from thinking. He defines the thinker as the one who is unceasingly in the way. What is important for Heidegger is the necessity of passage, in his own word ‘Weg’, and how to pass rather than destination.

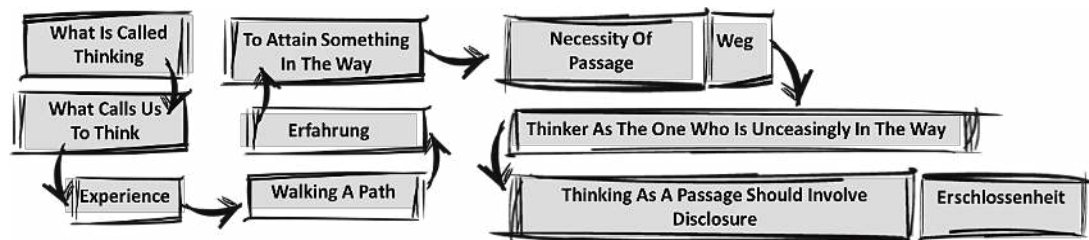


Figure 7. The Way of Thinking for Heidegger (by author)

Continuing on this line, according to Gail Stenstad (2006) in ‘Thinking after Heidegger’, to Heidegger, thinking as a passage should involve disclosure, in his word *Erschlossenheit*. Heidegger also applies the term *Gelassenheit* which means releasement from things (Sharr, 2010). In other words, releasement means to observe the world devoid of any instrumentality, to let the world be mysterious.

Heidegger puts this meditative thinking against the technological mind which deems world as resource to be consumed. As claimed by Albert Borgmann (1987), To be honest, man is possessed by technological mind to the extent that even the terms like natural resources, which is defined to the values of nature is rooted in severe instrumentality.

2.1.5 Thinking and Dwelling

Throughout defining the concept of ‘da-sein’, Heidegger brings up the significant statement that ‘man is the only being who brings up the question of being’. The fact lies within this statement is the rule of language as the means of this ability in man. in

this regard, Heidegger (1977) within his arguments in ‘letter on humanism’, highlights that “language is the house of being, and in its home human being dwells.”

Considering this, as mentioned before, Heidegger asserts that to think is to dwell on earth and the contemporary man who is possessed by technological mind has lost his ability to dwell, so with regard to the above mentioned, this situation of thoughtlessness, brings man a state of rootlessness and detachment from earth (Borgmann, 1987).

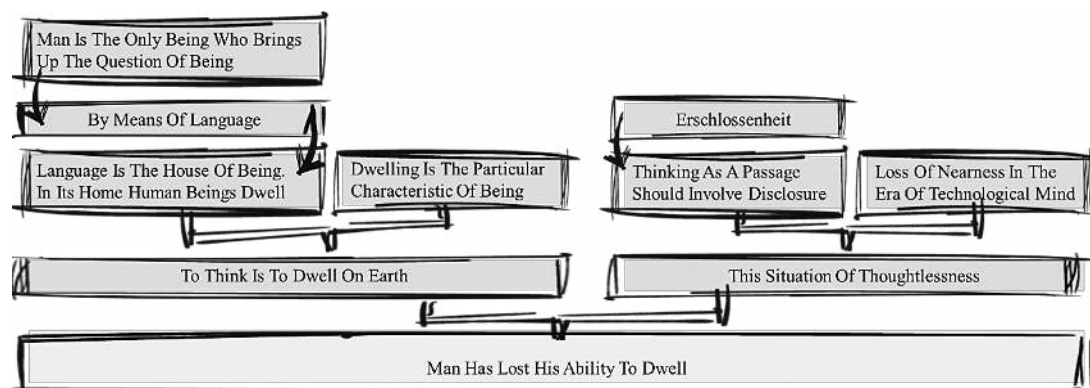


Figure 8. The Way Man Has Lost His Ability To Dwell (by author)

2.1.6 The Essence of Technology

According to Manginē (2014) In spite of Heidegger’s intense critiques on the dominance of epidemic technological mind on contemporary man, His conception on the core spirit of technology is a whole different story. In this sense, Heidegger in his book the ‘question concerning technology’ concentrates on the core essence of technology, in which, he infers that the spirit of technology is ontological rather than ontic. In this sense, he emphasizes that the essence of technology is not technologic. Here he gives the analogy of a forest, that when we are talking about the essence of tree, the concentration is not on each of the trees in forest, so the essence of technology is not evident in any technological thing like turbine, power station or airplane.

In continue, he elucidates two main issues on his subsequent discussion on the essence of technology. Firstly, the spirit of technology is not an instrument to an aim. Secondly, he opposes the idea that technology is man-made and at the service of man. Therefore, to Heidegger the essence of technology is nor instrumental neither anthropological (Borgmann, 1987).

Hence Heidegger brings up another point to shed light on the topic. He asserts that there is difference between the correctness of something and truth of it (Sartre, 1992). The correctness of a thing is always about determination of the related matters, while the truth is about uncovering the core essence of the thing. So the truth is the disclosure.

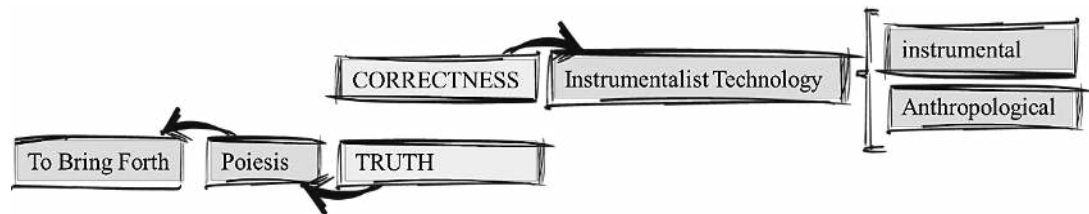


Figure 9. The Truth of Technology Is Not Technologic (by author)

Then he argues on the instrument, which he defines it as a thing which causes another thing. So Heidegger infers that every instrumentality comprises causality. Consequently, technology involves causality. Considering this, Heidegger focuses on the origin of the term cause, and explains that the core meaning underling the term cause, is to owe or to be responsible. Accordingly, the cause is the thing which the other thing owes its being to it. Thus he brings up the question that what is to create, and his response is that creation of a phenomenon is a process. In continue, he brings up the term 'Poiesis' to demonstrate the essence of creation (Borgmann, 1987).

Following that, Heidegger in his essay ‘The question concerning technology’, concentrates on the etymology of the word technology. He expounds that the term ‘technology’ is rooted in the Greek ‘Tekhne’, which refers to ‘Poiesis’. Taking this into account, he describes that ‘Poiesis’ underlies the meaning of ‘bringing forth’. In other words, to bring forth is to disclose the thing which was concealed heretofore. Heidegger entitles this as ‘A-Letheia’ in Greek which is the equivalent for unconcealment in English. Consequently, he infers that the truth of technology is a way to unconcealment, so it is ontological.

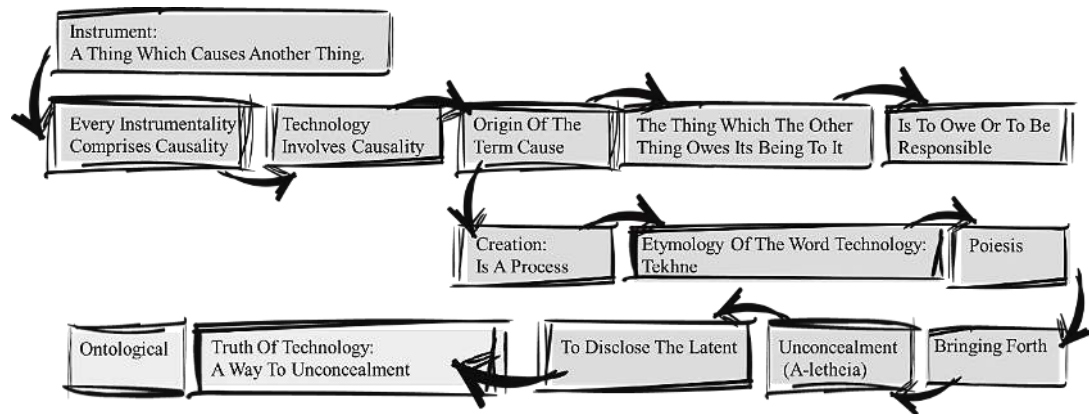


Figure 10. The Truth of Technology (by author)

2.1.7 ‘Meditative Thinking’ Against ‘Technological Mind’

On the other hand, according to Watts (2014), Heidegger elucidates that the instrumental technology today, by no means is ‘Poiesis’ or bringing forth despite the fact that it is still creation and revealing. So what kind of revealing it is? In response Heidegger refers that modern technology is an intrusive revealing, which enslaves nature and aggressively demands it to be the source of energy till it is entirely extracted and exhausted, so modern technology dominates nature.

In continue Heidegger enumerates the characteristics of the calculative mind in relation to nature, which believes Nature should be consumable, storable and calculable. He describes that technological mind is in avidity upon storing maximum quantity of things in order to consume later. In fact, he believes that technology tends to imprison nature and put it in the state of standing reserved. Due to elucidate the point Heidegger compares the old wind mill and the water dam in which, the wind mill will await wind's blowing while the water dam unlocks energy from nature and imprisons it due to use up and after that just throws it away (Mangine, 2014).

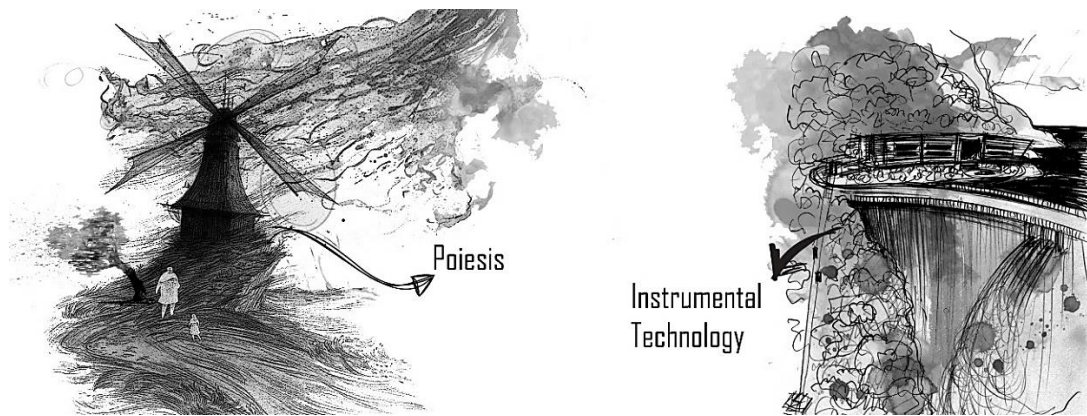


Figure 11. The Windmill Awaits Wind's Blowing While the Water Dam Imprisons Nature Forces (by author)

Moreover, he adds that technological mind is just concerned about usefulness of things and tends to maximize the efficiency in any process at any cost. In addition, according to Arthur Kroker (2015) Heidegger refers to the willfulness of man involved with technological mind, in which tends to make anything his subject of study and calculation by means of his will and disrupts all enigmatic dimensions of world in man's mind.

In regard to this point, he mentions the example of the moon in which he explains that before man's space explorations and landing to touch its surface, moon was

distinguished as an adorable holy gleaming on the night sky, the magnificent subject of the poets as the unachievable goddess, but afterwards, the image of the moon in man's mind is just a dark cold perforated rock reflecting sunlight which conquered by man (Tkachyk, 1994).

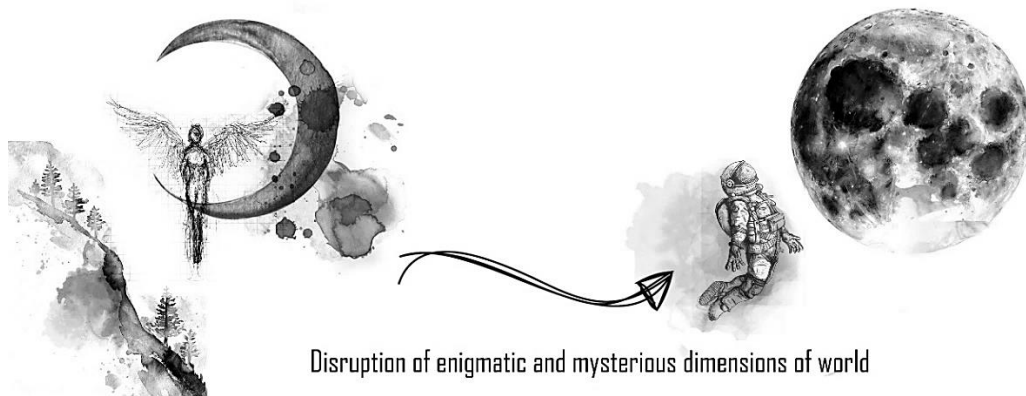


Figure 12. Calculative Thinking Eradicated Mysterious Dimensions of World (by author)

Given these points, Heidegger infers that dwelling on earth is only possible through meditative thinking, the way of thinking in which truth is touched through releasement from things. He recommends the thinking which celebrates being in the world rather than being in a crave to make everything his subject of study and calculation. He admits the way of thinking which is open to mysteriousness of the world, the thinking which puts man in state of waiting for the moment of disclosure. Consequently, man becomes able to dwell in the world of things which are near to him, the nearness that causes man to root on the earth.

In fact, dwelling for Heidegger is a moral matter. According to Michael Watts (2014), Heidegger believes that dwelling will determine the way of our being-in-the-world. According to his claims, contemporary man should change his spatial perception. The dominant technological mind is propelling man to thirst for infinity in every aspect of

life, even in spatial perception. Then he refers that for ancient Greeks, space was defined by the term, *Peras*, which means boundary. He believed that boundary is the threshold that a thing begins its being. So being is interlocked with boundary (*Peras*). Heidegger describes that man's being in the world is interwoven with bounds that he terms them as fourfold. He explains that to dwell is to accept that man is a mortal confined on earth, under the sky, waiting for divinities. Therefore, he infers that dwelling is possible only through gathering of the fourfold components of the world as boundaries. In other words, to dwell is to let the world donate you your being-in-the-world through being bounded by fourfold.

In addition, he states that dwelling as a moral matter is to be responsible for taking care of our "being-in-the-world" in order to reach peace. He declares that contemporary man has lost the art of silence. We should let the silence to dwell in us and this is the way to poetically dwelling. He reminds that poets know the art of dwelling. They dwell on earth through language; As Heidegger believes that language is the home of being.

2.1.8 Section Summary

In general, what Heidegger suggests for regaining the lost nearness to the world is a divergence in the way of thinking; accordingly, he suggest meditative thinking as an alternative for technological calculative thinking. In this sense, he asserts that the only way to 'dwell' on earth is the meditative way of thinking which brings about *Poiesis* through immediacy of daily life. Therefore, following Figure is a comparison between structures of meditative thinking and technological mind.

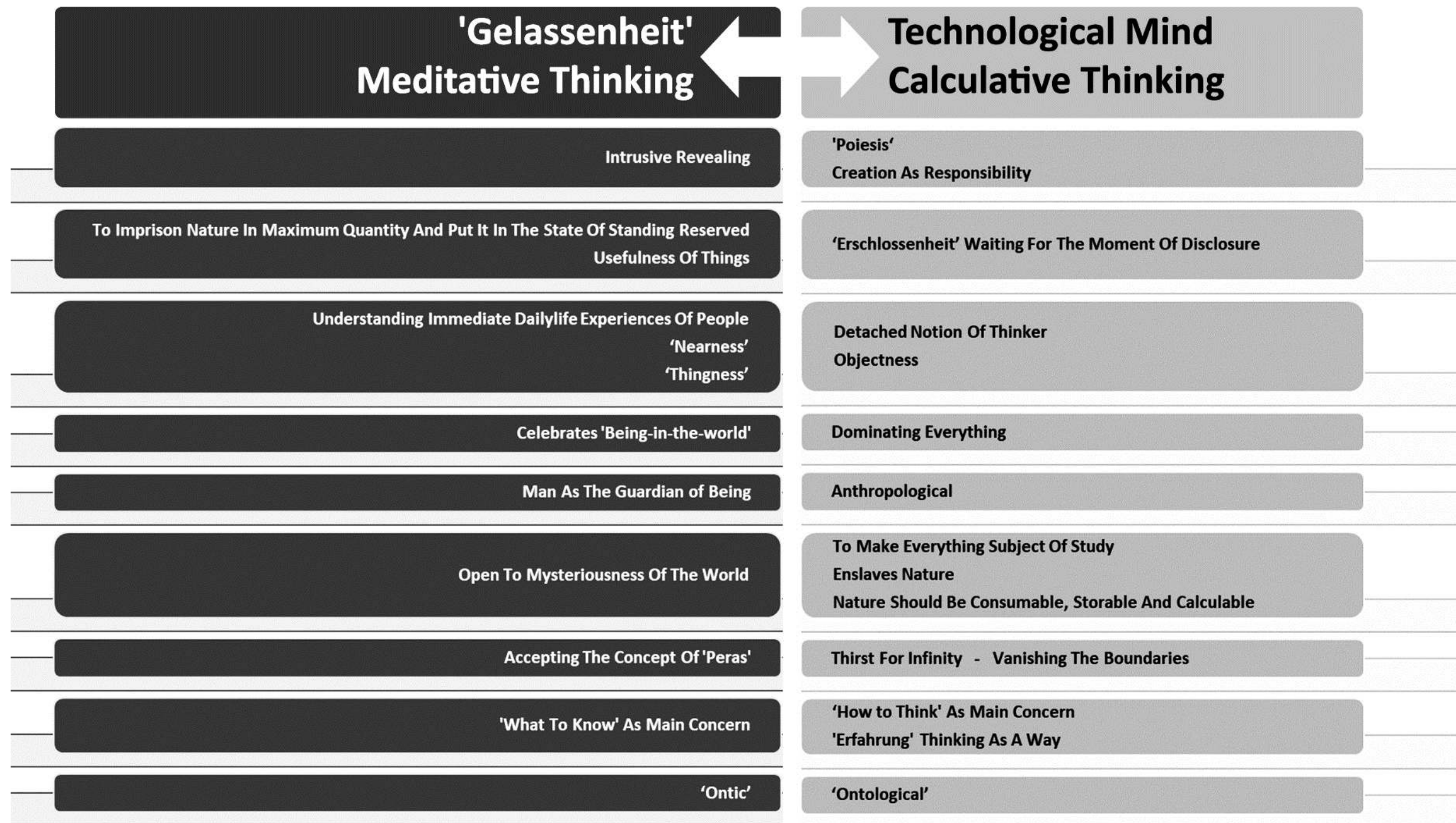


Figure 13. Structure of Meditative Thinking towards Technological Mind (by author)

2.2 Heidegger's 'Hypothetical Jug'

According to Borgmann (1987), Heidegger believed that scientific mind is not able to reveal people's immediate experience of being-in-the-world in their everyday life. In the words of Braver (2014), Heidegger condemned the dominantly detached state of thinker in the contemporary scientific realm. Manifestly, he disputed the object-subject mindset rooted in technological mind, in which a separated object and subject are supposed in every kind of perception, instead he suggested the term 'being-in-the-world' in which the thinker is part of the world of things in a state of intimacy and waiting for disclosure.

In Heidegger's standpoint, understanding the world of things is merely probable through the experience which is interlocked with the ordinary daily life circumstances in order to situate the thinker in the state of being-in-the-world (Sharr, 2010).

2.2.1 Concept of Nearness, Understanding Man's Daily Experience

Continuing on this line, Heidegger states that the dominance of technological mind altered the understanding of nearness in people's mind (Mugerauer, 2015). According to him, technological mind not merely errs in claiming that mass media and fast travel reduced the distances and brought everything near and accessible to man, but also interrupted man's immediate experience in the world. To put it simple, according to Barbaza (2003) technology eliminated factual closeness of man to his world.

In view of that Heidegger brings up the question that what is nearness in essence? In response he explains that nearness is the state in which man calls a thing. Thereafter, He infers that the essence of nearness is linked with the understanding of thingness. In words of Heidegger, the idea of thingness is a clear objection to the idea of modern

categorizer intellect which is isolated from immediate experience of things in the world.

He assigns the term ‘thing’ above the term ‘object’ to supersede the abstract detached notions of matters with tangible experience of immediacy in everyday world of things which is attained through use. Therefore, thingness is tangled with nearness (Walsh, 1963).

2.2.2 Hypothetical Jug, Perception of Nothingness in Daily Life

In this sense, he puts forward the example of a hypothetical jug to highlight the disability of scientific mind in revealing people’s immediate experience of being-in-the-world in their everyday life. He expounds that the emptiness inside the jug enables man to use it as a jug in his everyday life. Accordingly, in people’s viewpoint, the jug is empty and the inner nothingness is the essential character of the jug (Harman, 2011). People appreciate the absence in jug since they use it through an immediate experience.

Indeed, in line with Mitchell (2015) people relate to things through using them, but science fails to understand the void inside the jug. In other words, scientifically the jug is never empty even when there’s no fluid inside, the molecules of air are replaced with. So nothingness (or mere absence of matter) is not defined in scientific realm.

In this sense, Heidegger links this issue to his fundamental philosophical concern of being, that failure of science in understanding the opposite of being, nothingness, reveals the inevitable fact that detached observer in technological mind cannot appreciate people’s immediacy of experience through using things in their daily life.

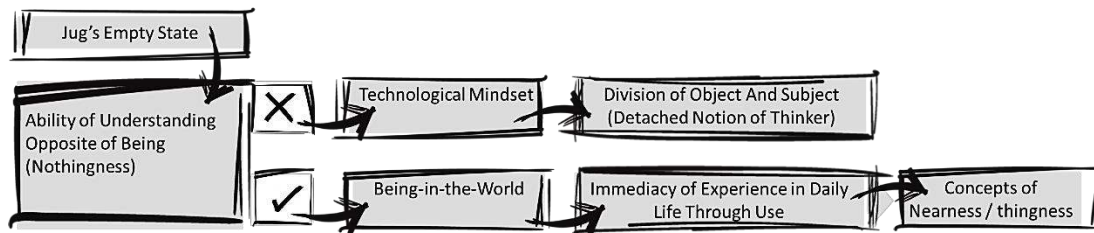


Figure 14. Hypothetical Jug, Perception of Nothingness in Daily Life (by author)

2.2.3 Concept of 'Thingness' in 'Being-In-The-World'

In this regard, on the word of Sharr (2010), Heidegger intentionally uses the term 'it seems' during his reasoning on the jug as a thing rather than object, in order to emphasize on the priority of how things seem to us. According to Heidegger, it's only after the immediate experience of a thing that thinking begins. In other words, it's the immediacy of experience in use that upgrades an object to a thing.



Figure 15. Concept of 'Thing' (by author)

In line with this, he asserts that notion of object and detached observer depreciates the values of being-in-the-world. Accordingly, Heideggerian notion of thingness highlights the authenticity of man's conception of the world through immediate experience in daily life. Moreover, it sheds light on the wisdom beneath the moral manner of releasement from things in Heideggerian meditative thinking, in which man hesitates to make everything his subject of study from a detached standing point, instead tries to become part of the world in a state of co-existence through immediacy of experience (Heidegger, 1971).

In light of this, Heidegger maintains that it is the immediacy of use in practical quality of everyday life that brings nearness to man. To put it differently, in line with Mitchell's (2015) interpretation, the essence of a thing is derived from the way it relates man to the world through its non-mediated use.

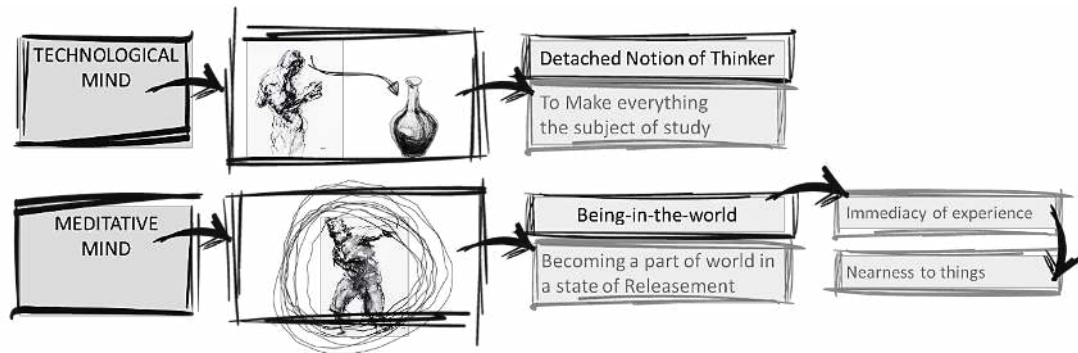


Figure 16. Main Concerns of Technological Mind Towards Meditative Thinking (by author)

Accordingly, Heidegger in his essay 'the thing' (1967) brings up the platonic term 'Eidos', which means what something stands forth, by ratiocinating that hypothetical jug is made with the void inside in order to hold the liquid within itself. He infers that the Eidos of the jug is emanated from two facts:

- The way the thing is made
- How it is experienced through man's viewpoint

2.2.4 The Fourfold; Enfoldment of Man's 'Being-In-The-World'

Moreover, according to Heidegger, man's being in the world is interwoven with bounds that he terms them as fourfold. He explains that to dwell is to accept that man is a mortal confined on earth, under the sky, waiting for divinities. As mentioned before Heidegger infers that dwelling is possible only through gathering of the fourfold components of the world in a built thing as boundaries. Consequently, he gets deep

into the concept of hypothetical jug in order to define the essence of fourfold in his conception of dwelling (Sharr, 2010).

In view of that Heidegger describes that the void inside the hypothetical jug has made it able of pouring. According to his conception, jug's ability of pouring that is emanated from the nothingness within should be appreciated as a sacred gift, which he terms it as 'das geschenk'. He likens this gift to a sacred natural headwater of spring in which the never ending water is emanating from a mysterious origin (Harman, 2011).



Figure 17. Heidegger Pouring Water in Jug From the Water Spring Near His Hut
(The Charnel-House, 2014)

In this sense, Heidegger carries on his argument on hypothetical jug so as to define the essence of the fourfold. In line with his explanation, a vessel's essence is emanated from dynamism betwixt the matter as Beingness and void as nothingness. In other words, the jug is embodied out of earth and the nothingness inside is the permeation of deep void of sky above the earth.

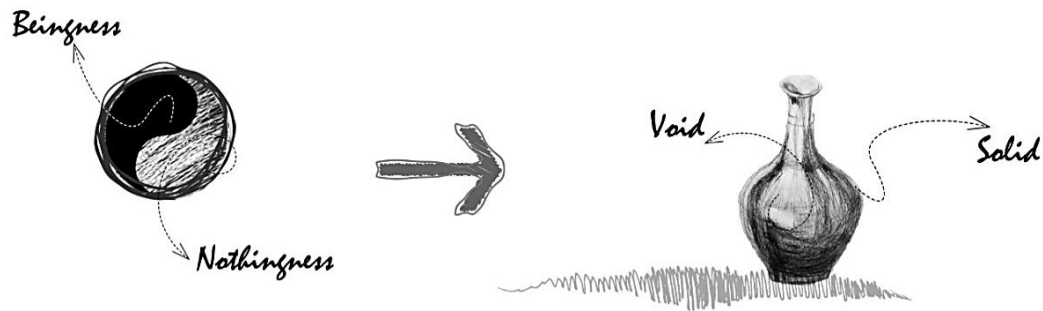


Figure 18. Interplay Of Solid, Beingness, And Void, Nothingness, as Genesis of Hypothetical Jug (by author)

Thus, he infers that the jug interlocks man's experience of the earth and the sky above it by dint of outpouring. With regard to this, he refers to the ability of outpouring as a giving matter like a sacred donation. In this, he applies etymology in order to get deep into the essence of this pouring. He refers to the German root 'guß' which is the equivalent for the English term 'gush' that indicates to intense flow out of a liquid. Accordingly, he links the 'guß' to the rainfall as the gift of sky to man. In addition, he alludes to the 'gush geschenk' which he describes it as the poured donation from sky. Therefore, according to his interpretation, the matter of outpouring water from hypothetical vessel refers to a sacred libation, a donation of life giving water to the mortal man from divinities through sky. Consequently, once the mortal man is pouring water out of the jug, the four constituents of his existence conjoin as a unit whole to enframe his being-in-the-world through the immediate experience of using the jug for drinking. In this sense, earth (jug's embodiment made out of earth), sky (the void inside jug), mortals (man) and divinities (through the gift of outpouring) gather as the Heideggerian fourfold conditions of existence in man. Moreover, uncovering another meaning underling the term 'geschenk' which refers to a unified whole reveals how wisely Heidegger interpreted the matter of pouring in hypothetical jug through etymology (Heidegger, 1971). Following figure is the illustration of the way the 'Fourfold' interweaves with the experience of man using the jug.

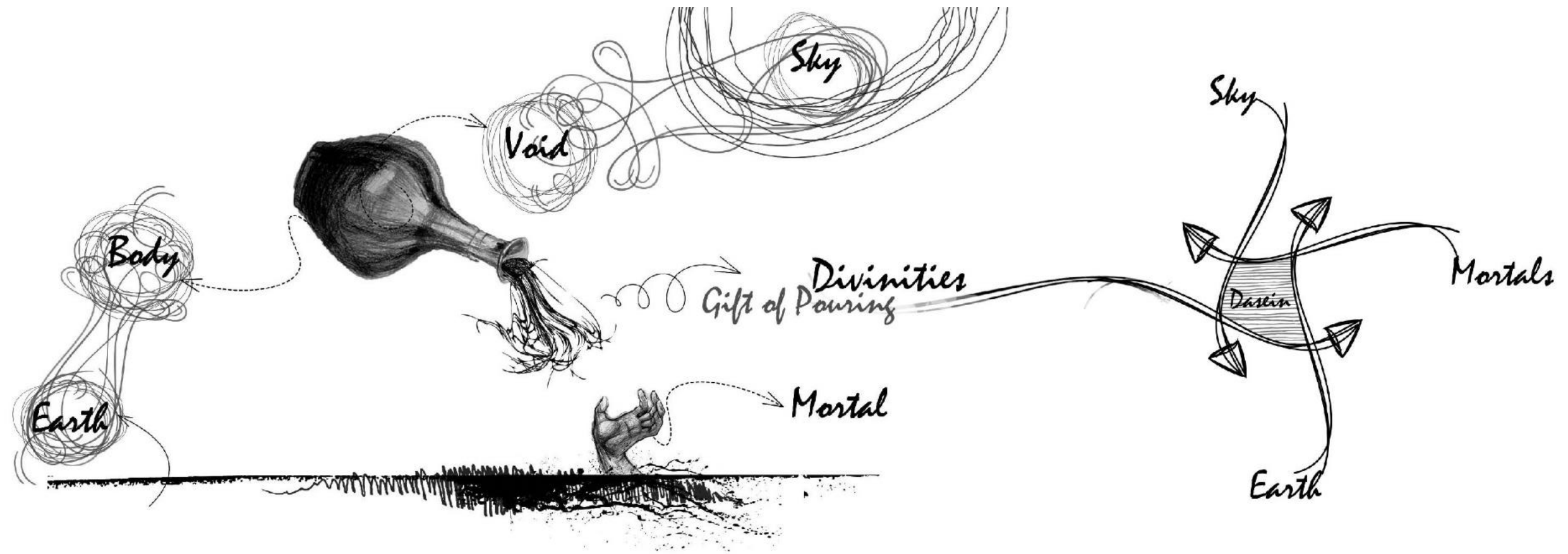


Figure 19. The Fourfold Encompassing Man's Immediate Experience by Dint of Jug's Outpouring Gift (by author)

It is important to note that, the fourfold components of human existence have never been defined separately as self-sufficient units during Heideggerian arguments (Mugerauer, 2015). According to Mitchell's (2015) conception of Heidegger, each of these existential constituents, define each other mutually depending on specific circumstances of every immediate human experience through built things. In other words, the four are interwoven in constant mirror-play to enframe man's being-in-the-world as inescapable primordial forces.

According to Harman's interpretations of Heideggerian world (2011), the fourfold gives man enough rope to orientate his being-in-the-world. That is to say, to Heidegger, by dint of this orientation man gains the opportunity to appreciate his enfoldment in the world of every day routine experiences, so as to feel at home. In fact, the concept of fourfold is precisely in line with Heidegger's notion of meditative thinking, in which man appreciates his enframeness on earth as a mortal who is in a co-existence with the world around. In his concept the mortal is open to the mysteries of the world. Therein lays an opportunity to give man a drop of tranquility contrary to his constant state of anxiety emanated from his state of thrownness in the world. Thereby Heideggerian concept of dwelling emerges which will be deliberated further.

Fourfold as 'Peras' In Spatial Perception

According to George Steiner's commentaries on Heidegger's conceptions of being (1991), Dwelling to Heidegger is a matter of morality as he refers to the piety of thinking in his arguments. He maintains that through dwelling we may embody the way of our being-in-the-world. He takes a critical turn against modern conception of space and proposes a revolution in spatial perception as the only solution to the dilemma which contemporary man is faced with.

The prevailing technological mind is urging man to thirst for infinity in every aspect of life; even in spatial perception technological mind tends to eliminate boundaries. Heidegger discusses that for ancient Greeks, space was defined by the term, 'Peras', which means boundary. He believed that boundary is the threshold that a thing begins its being rather than an end point. So being is interwoven with boundaries (Peras).

In light of abovementioned, it can alternatively be stated that fourfold, in essence are the bounds interlocking man's being in the world. According to Heidegger, to dwell is to accept that man is a mortal confined on earth, under the sky, waiting for divinities. Therefore, he infers that dwelling is possible only through gathering of the fourfold components of the world as boundaries.

2.2.5 Concept of 'Gathering'; Nexus between Thingness and the Fourfold

Patricia Johnson in her book 'On Heidegger' (2000), interprets that Heidegger's intention to illustrate the crux of fourfold in hypothetical jug was mainly to infer that the essence of thingness is in 'Versammeln', gathering. Heidegger gets deep into underling layers of meaning in the word 'thing', in German Ding, through etymology. He seeks through multilayered roots of the term 'thing' in Old Latin, Greek and German and consequently he ends up with a mutual origin with the word 'gathering'. Astonishingly, connotations on nature of the jug lay beneath the aged obsolete root found as joint between thing and gathering.

Regarding this nexus, Heidegger justifies that according to the revelation through language, the essence of thingness is interwoven with gathering. Then he clarifies that the crux of thinging is in gathering the constituents of the surrounding world for the moment of disclosure. In other words, what is gathered during thinging of a thing by dint of its immediate and tangible experience in daily use is called the fourfold.

Heidegger illuminates the point, by referring again to the hypothetical jug, in which the jug attains the gift of outpouring by dint of emptiness inside, and through this gift, opens up the possibility to summon the four primordial of being-in-the-world in order to reflect them to the man who is in interplay with it by virtue of the nearness that emerges through immediacy of daily use.

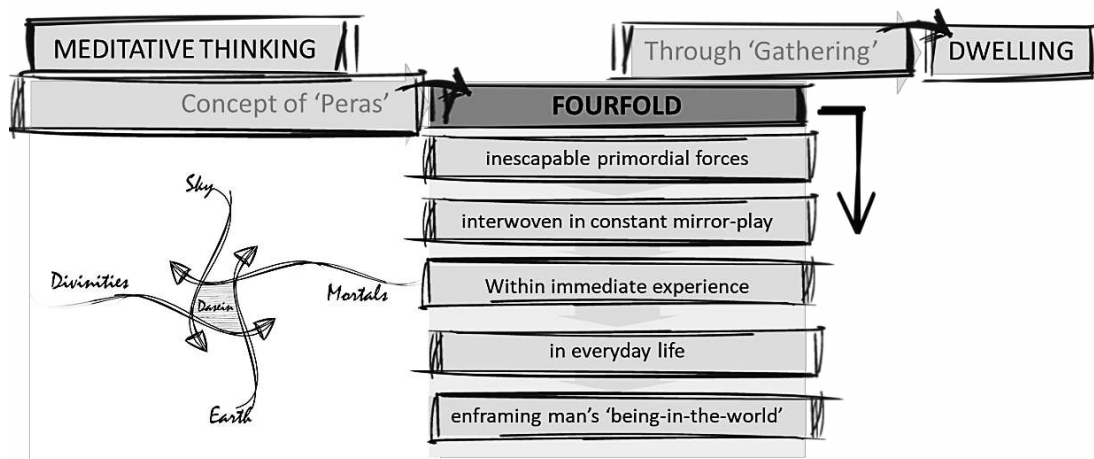


Figure 20. Structure of the Fourfold Thought the Concept of 'Peras' (by author)

2.2.6 Section Summary:

This section initiated the arguments by seeking for the essence of nearness, and in the long run succeeded touching it. In this sense, Andrew J Mitchell in his book 'the fourfold' (2015), interprets the way in which Heidegger follows numerous layers of conception within his arguments on nearness and draws them together as following.

We thought about the ordinary jug we use in our everyday life in order to disclose the essence of nearness. Through pursuing the crux of nearness, the essence of thingness has been revealed by virtue of the routine tangible jug, whereas without our presence and experience whilst engaging with the jug there will be no thingness anymore. But as stated before thinking is a way, and we touched the essence of nearness in way of thinking on thingness. The jug gathers the fourfold by dint of its thingness, and

consequently reflects them to us in the moment that we get into an immediate experience with it. So, thingness depends upon gathering and reflecting the four primordial bounds of existence to man, and accordingly nearness is all about the nexus between man and the fourfold. Significantly, we encounter Heidegger's minimal quote on the beginning of our discussion: near is what we call things! Following (Figure 21) is the illustration of the structure of mentioned key concepts and the respective relations between them.

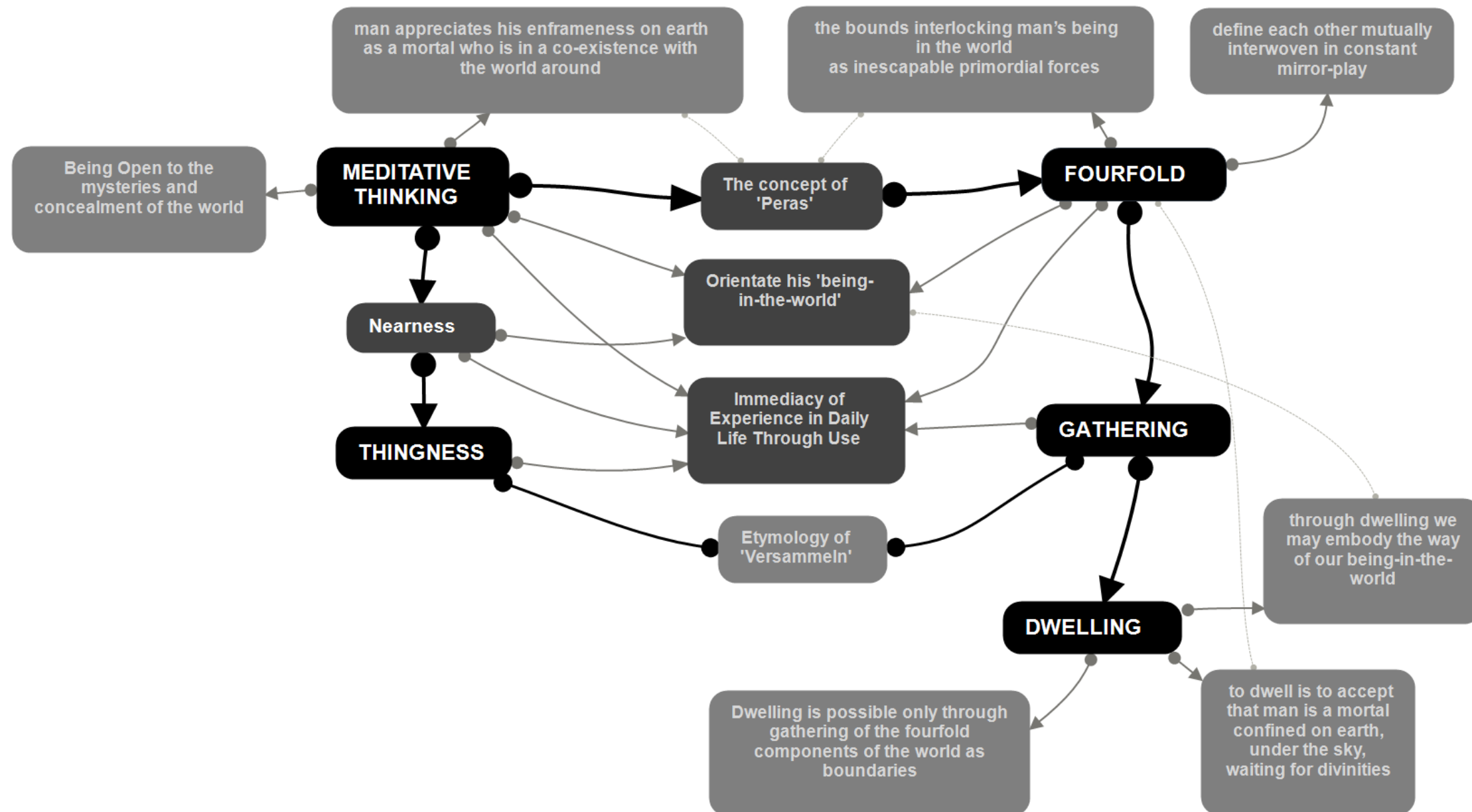


Figure 21. Structures and Relations of Heideggerian Concepts on 'Dwelling' (by author)

2.3 Heidegger's 'Hypothetical Bridge'

According to Lefas (2009), Heidegger in his 'Building, Dwelling, thinking', rises up the question that 'what is the relation between building and dwelling? In this regard, he sheds light on the way in which building belongs to dwelling. Heidegger initiates his argument by criticizing contemporary so-called Buildings, which factually do not belong to dwelling as built-things.

Heidegger notes various contemporary residential buildings which are not dwelling place for man nowadays. He brings about the question that does the touchstones of contemporary architecture such as 'efficiency of planning due to maximum lighting and ventilation or economic efficiency', assure the possibility of dwelling for man? In this respect, Heidegger highlights the concept of 'nearness' in the account of 'thingness' (Borgmann, 1987). Simply put, for Heidegger, occupation of buildings by man does not refer to dwelling if they don't 'feel at home'. Therefore, Heidegger asserts that man do not feel near to the contemporary residential buildings. In this sense, the terms which Heidegger refers to for contemporary buildings are considerable; all these terms imply the priorities of maximum efficiency in mass production systems over the fact of man's dwelling (Manginē, 2014). Given this circumstance, Heidegger states that owing the prevailing system of building, the immediacy of experience has been lost within the act of building. He calls these type of buildings, merely 'products for consumption'. In other words, according to Lane (2006), within Heideggerian standpoint, to build is to dwell itself rather than a means.

2.3.1 To Build, To Dwell

Considering the underling nexus between building and dwelling, Heidegger brings up the etymology these terms, in which they are both rooted to the same ‘Old German’ origin, ‘Bauen’. The term ‘Bauen’ literally is to dwell. However, this term is originated in way much deeper notion. Heidegger interprets that ‘Bauen’ is derived from ‘bin’ in ‘ich bin’ which refers to ‘I am’. Actually, Heidegger infers that ‘to dwell’ is ‘the way that man is on earth’ (Barbaza, 2003).

New Definition of Building

Besides, the term ‘Bauen’ simultaneously refers to ‘cherishment and protection’, ‘to care for the earth and cultivate the soil’. likewise, ‘Der Bauer’ refers to the farmer. In this sense, Heidegger introduces his own definition to factual build. In His view, to build is to nurture a seed under the ground into a grown plant (Lefas, 2009). Moreover, the most crucial point of this identical origin is the interweave between build and dwell within the crux of man’s experience of being. Heidegger reminds that building and dwelling were once experienced simultaneously as a unified whole. In this sense, Heidegger uses the term ‘Built Thing’ instead of ‘Building’ to highlight the ‘nearness’ which is experienced in dwelling which is coupled with building.

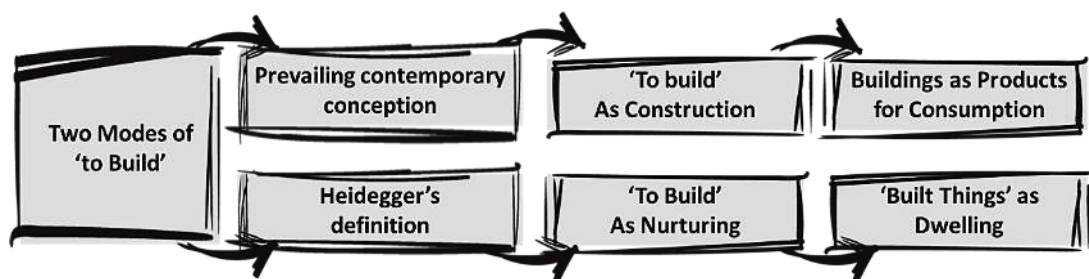


Figure 22. Two Modes of 'To Build' (by author)

Conjoined Genesis of ‘Build and Dwell’

Bearing in mind Heidegger's discussions on concepts of 'thingness' and 'nearness', he infers through linguistic proofs that factually, to dwell is to be at one with world and consequently to build is to nurture (Sartre & Aronson, 1992). In this sense, Heidegger highlights the conjoined genesis of 'Build and Dwell' by giving an example of an ordinary dining table. In the first glimpse it seems that a readymade and prefabricated dining table has nothing to do with build and dwell. However, Heidegger has a different point of view.

Daily life examples of 'Build-Dwell'

According to Capobianco (2010), Heidegger claims that any type of dining table has an interconnection with building and dwelling by dint of its immediate participation in man's daily life. In Heidegger's view, people use their dining table and get engaged with it within their daily life and this involves building and dwelling. To be specific, people interact with the table according to their needs. They may arrange the table in the room depend on their needs or arrange the plates and meals as they prefer on the table. Also they choose their own relative situation to the table according to their preferences like view, nearness to the favorite meal, nearness to the beloved persons on the table, etc. Heidegger refers to all these responses to the needs of users as building. In this regard, users dwell through engagement with the dining table according to their needs (Horst & Seana, 2004). In consideration of the foregoing, building and dwelling, both depend on and follow each other.

Afterwards, Heidegger gives an illustration of interaction between building and dwelling within a house (Tonner, 2018). While in a family a new child born, the infant needs near and persistent care, so within the first month's parents keep the child in a cradle in their private room. But after a while as the kid is a little grown, the parents feel uncomfortable and prefer to move the kid to another place. This issue involves

dwelling. and the response is to build a room for the kid. Heidegger describes this as ‘dwell needs the build which responds to’.

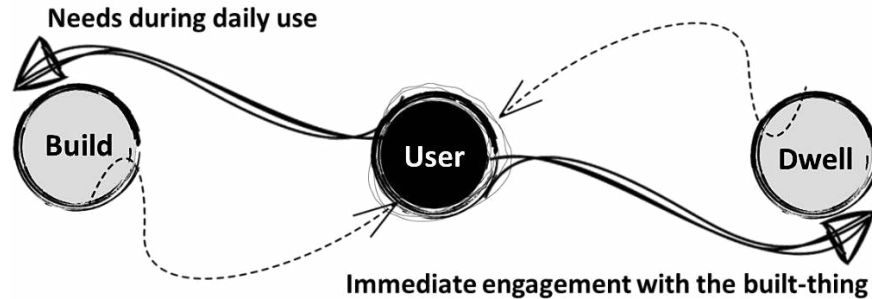


Figure 23. Correlation of Build and Dwell in Daily life (by author)

As reported by Malpas (2012) in his book ‘Heidegger and the thinking of place’, building and dwelling where once took place simultaneously through interweaving with the fourfold over the time pass. But nowadays, the connection between building and dwelling is distorted by priorities of professionals; consequently, the immediate way of ordinary life is out of focus today.

Dwelling; To Be At One with Earth and Sky

In addition, according to Sharr (2010) Heidegger examines the etymology of ‘Wohnen’ which is also linked to the term ‘dwelling’. He explains that the Old Saxon ‘Wuon’ refers to ‘staying in peace’. Heidegger uses the term ‘Friede’ to imply on ‘peace’, which also refers to ‘refrain from danger’ or ‘to spare’. These explanations shed light on Heideggerian conception of dwelling. As mentioned before, for Heidegger, dwelling is intertwined with the fourfold constituents of world. Heideggerian concept of fourfold claims that mortal man is on earth under the sky awaiting divinities.

The conditions on earth situates man as the ground of existence and consequently man stays at one with earth (Tonner, 2018). Likewise, the sky envelopes man's existence on earth through conditions that brings about to man's daily life like atmospheric events like rain and snow; or by natural components like sunlight and wind. Earth and sky also bring about the feeling of time passage through change of seasons or continues sequences of day and night. According to Gauthier (2016), Heidegger maintains that the mortal man should gracefully accept the conditions of earth and sky even the inclemency of weather. In Heideggerian conception, man's lack of control over conditions of existence within earth and sky are clues to natural forces beyond man's intention. As considered before, Heidegger believes that man should appreciate and await the mystical dimensions of the world; the concealed dimensions which should be merely revealed through Poiesis; rather than intrusive revealing in nature.

The 'Built-Thing'; Gathering the 'Fourfold' Through 'Poiesis'

To sum up the abovementioned discussions, Heidegger suggest the idea of 'piety of dwelling' which implies to releasement, awaiting and peacefully enabling natural forces which are already existing rather than intrusive revealing and subjugating nature (Parker, 2001). Accordingly, Heidegger develops his idea of thingness through indicating the way in which a 'built-thing' gathers the 'fourfold' through 'Poiesis'. In this sense, He brings about his second hypothetical model, 'the hypothetical Bridge'.

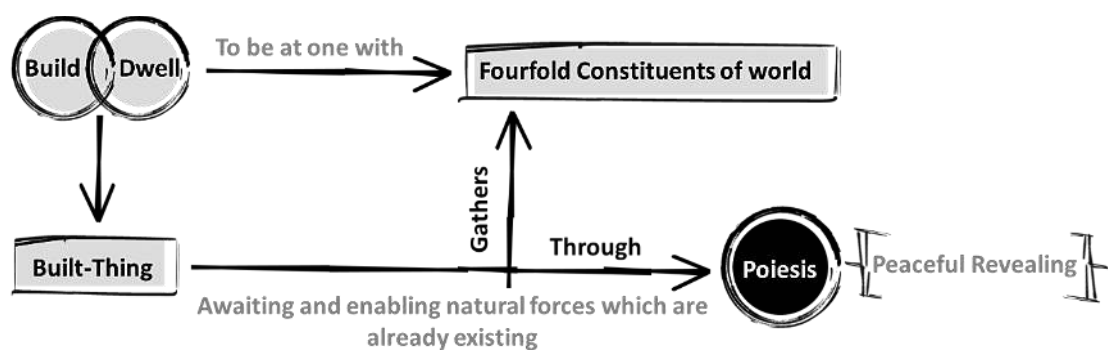


Figure 24. Structure of Heidegger's 'Piety of Dwelling' (by author)

2.3.2 The Conceptual Layers of ‘Hypothetical Bridge’

Having considered the way in which a ‘built-thing’ which is the outcome of intertwined build-dwell, gathers the ‘fourfold’ within the immediacy of experience in daily use; Heidegger’s conception of Hypothetical bridge will be studied hereinafter. Heidegger’s choice of a bridge alludes to the point that the term ‘built-thing’ comprises any outcome of the interlocked activity of building-dwelling; not merely the archetypal residential buildings. But according to Parker (2001), Heidegger’s main intention to bring up the example of ‘hypothetical bridge’ lays beneath the deep layers of etymology of the term ‘Brücke’. The Old German ‘Brücke’ refers to connecting a division by shaping passage over the obstacle (Cerbone, 2008). Accordingly, Heidegger hints at the most crucial essence of the building act; the bridge swings over the stream.

Bridge Swings Over Stream

Heidegger explains that the bridge swings over the river without blocking the flow of stream. According to Capobianco (2010), the bridge does not lock the forces of nature (the flow of stream) but at the same time affords the mortal man a way to pass the river. In this regard, Heidegger alludes to the way that mortal man brings forth the bridge (built-thing) as a Poiesis; the Poiesis which lets the stream to run its natural path and simultaneously grants man a way to the other side (Lefas, 2009). In Heidegger’s conception, the bridge is a built-thing which lets man to dwell on earth peacefully. This bears in mind Heidegger’s definition of dwelling, to be at one with world.



Figure 25. The Bridge Swings Over Stream (by author)

Bridge Brings Together Two Sides of Stream

Heidegger explains how the bridge intertwines dwelling with the fourfold constituents of the world through Poiesis. According to Manginē (2014), the bridge is a continuity of the concrete earth crossing over the gap within earth. In other words, the bridge joins two solids by a solid within a void.



Figure 26. The Bridge Brings Together Two Sides of the Stream
'Bridge Joins Two Solids by a Solid within a Void' (by author)

In this sense, through the 'bringing forth', the bridge interlocks the solidity of earth with the emptiness of sky in order to grant mortal man his way. Notably, the attitude of the bridge in affording the way to man is in the way that hints man his lack of control over natural forces beyond (the presence of divinities). Accordingly, this connection (which is brought about through interweaving with fourfold) immediately affects

man's daily life experience (Lefas, 2009); as Heidegger mentions 'the bridge realigns the role of the stream in the daily immediate experience of nearby dwellers.'

For dwellers nearby the river, due to the innate character of water stream, the river was always an obstacle to their way to the other side. Therefore, in spite of the fact that the distance between river banks may be mathematically short, but due to the feasibility of access, they have to traverse a long distance in order to reach to the other side. But, the bridge affords a way through the river to the other side, accordingly the bridge changes daily immediate experience of nearby dwellers.

The Place of the Bridge

Heidegger also explains that emergence of the bridge affects the way nearby dwellers conceive their situation in relation to the place of the bridge. As stated by Malpas (2012), before the emergence of the bridge, all the spots along the river are almost the same for the nearby dwellers. But merely when the bridge emerges in one of the possibilities, that spot will be the place of the bridge from that moment. In this way, the nearby dwellers may gather various memories due to their daily use of the bridge (Tonner, 2018).

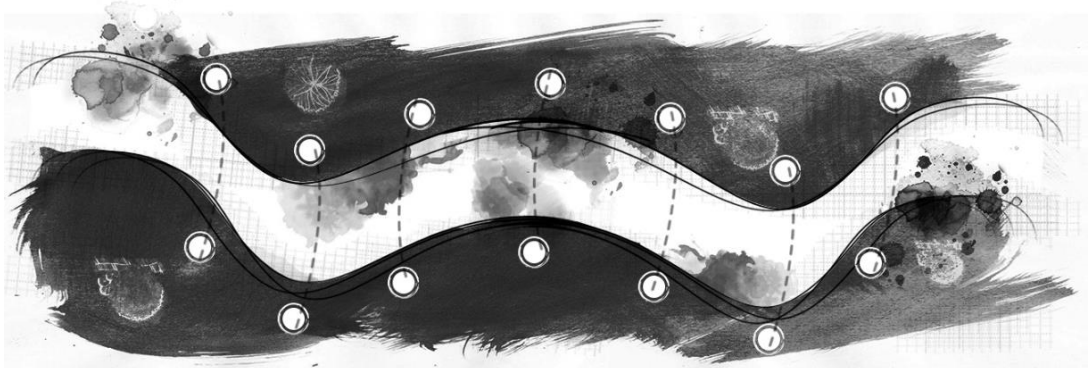


Figure 27. Before The Emergence of the Bridge There Are Many Indifferent Spots along The River (by author)



Figure 28. The Place of the Bridge Which Brings Together Two Sides of the River
(by author)

Bridge Situates Man's Immediate Experience In Connection With Both Sides of the River

With regard to the abovementioned, the bridge brings together two sides of the river and accordingly affects the way nearby dwellers conceive their situation in relation to the place of the bridge. The bridge actually links nearby dweller's immediate experience with the other side of the river (Lefas, 2009). Consequently, the presence of the bridge situates man's immediate experience in connection with two sides of the stream.

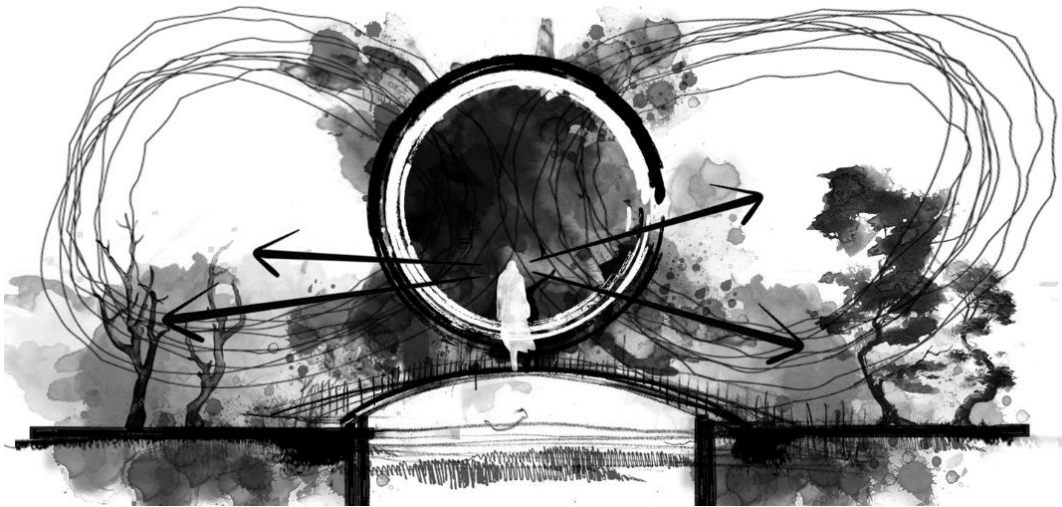


Figure 29. The Bridge Situates Man's Immediate Experience In Connection With
Two Sides of the Stream (by author)

Bridge 'Holds up' the One Who Crosses It

In the book 'inhabiting the earth', Foltz (1995) indicates that in Heideggerian conception, the bridge initiates a mutual ocular experience between the user and the world around the bridge. In this regard, Heidegger uses the term 'hold up' to indicate the bridge as an alive built-thing (Malpas, 2013). In Philosopher's standpoint, the bridge allows the one who crosses the bridge to see the world around and simultaneously exhibits the one who crosses it. Heidegger also calls it as 'quid pro quo'; to emphasize on the character of bridge as a living thing (Schatzki, 2007). In this vein, the bridge does not show the 'world around' until the user crosses the bridge and presents himself to the world around. Accordingly, Heidegger also analogizes the bridge to a 'picture frame'.



Figure 30. The Bridge 'Holds Up' the One Who Crosses It (by author)

Bridge Determines People's Understanding of the World around In Relation To It

In fact, according to the abovementioned paragraph, the bridge situates man's immediate experience in connection with both sides of the river only if the user allows bridge to present him to both sides. Notably, the extent of this ocular connection depends on the situation of the user relative to the bridge. As the user moves from one

bank of the river to the middle of the bridge, the connection of his immediate experience to both sides increases to the maximum.

2.3.3 Section Summary

Briefly this section Considers the underlying nexus between building and dwelling and how Heidegger sheds light on the way in which building belongs to dwelling. Heidegger states that owing the prevailing system of building, the immediacy of experience has been lost within the act of building. The crux of matter is the interweave between build and dwell within the crux of man's experience of being. Heidegger reminds that building and dwelling were once experienced simultaneously as a unified whole. In this sense, Heidegger uses the term 'Built Thing' instead of 'Building' to highlight the 'nearness' which is experienced in dwelling which is coupled with building.

Heidegger infers through linguistic proofs that factually, to dwell is to be at one with world and consequently to build is to nurture. In this sense, Heidegger highlights the conjoined genesis of 'Build and Dwell' by giving examples in daily life. Heidegger suggest the idea of 'piety of dwelling' which implies to releasement, awaiting and peacefully enabling natural forces which are already existing rather than intrusive revealing and subjugating nature. Accordingly, Heidegger develops his idea of thingness through indicating the way in which a 'built-thing' gathers the 'fourfold' through 'Poiesis'.

In this sense, He brings about his second hypothetical model, 'the hypothetical Bridge'. The bridge in Heideggerian conception, is a 'built-thing' which 'brings forth' a connection; the connection which affords the mortal man a way to pass the stream

without locking up the forces of nature. Subsequently, the essential significance of the bridge are the followings:

- Bridge swings over stream
- Bridge brings together two sides of stream
- Bridge situates man's immediate experience in connection with both sides of the river
- Bridge 'holds up' the one who crosses it
- Bridge determines people's understanding of the world around in relation to it

2.4 Chapter Summery

The following (Figure 31) is a holistic review of structures and interrelations of the concepts grounded on Heideggerian notions of 'dwelling' and 'Built-Thing' which have been raised within this chapter.

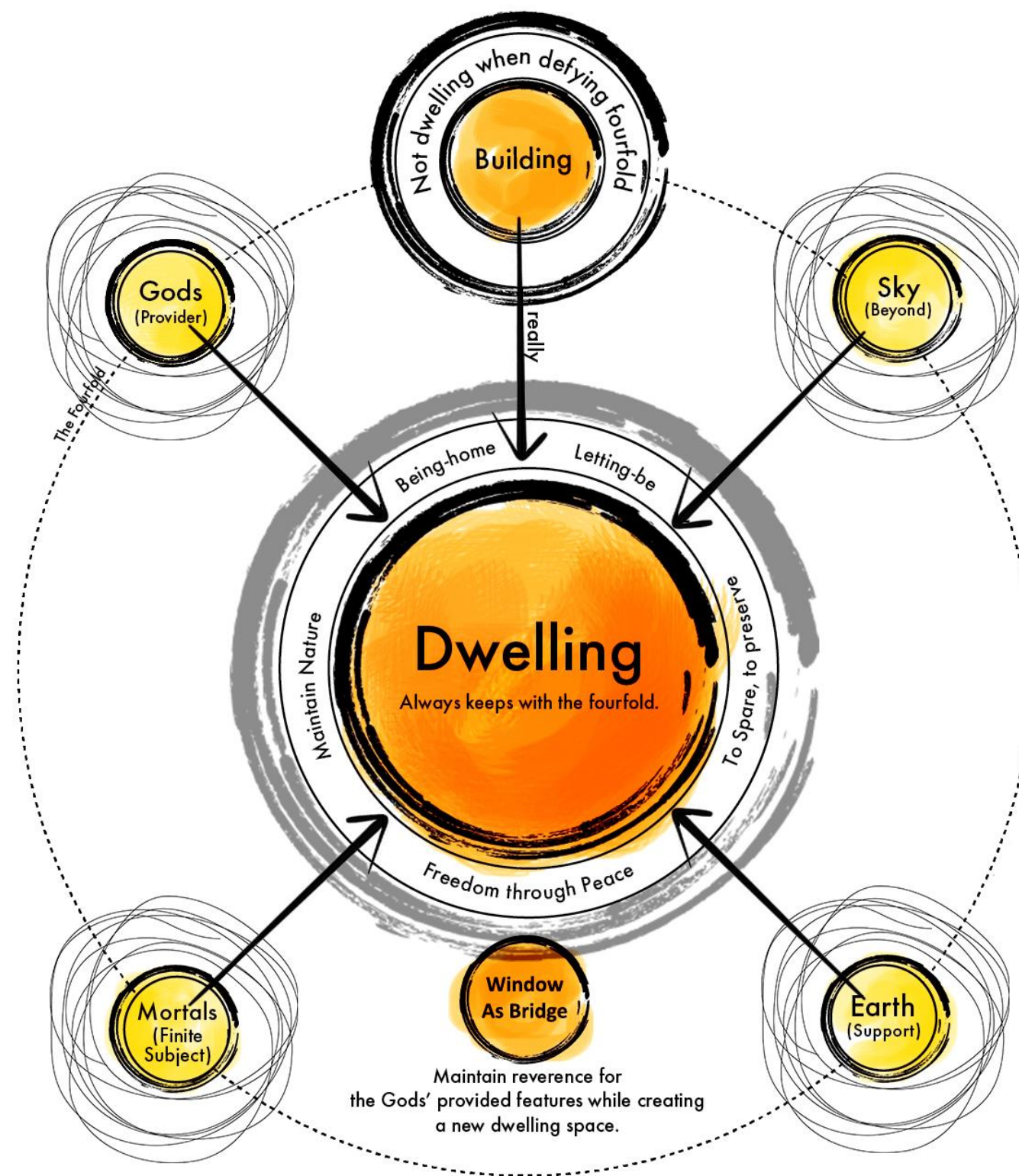


Figure 31. Holistic Review of Structures and Interrelations of the Concepts Grounded on Heideggerian Notions of 'Dwelling' And 'Built-Thing' (by author)

Chapter 3

ONTOLOGICAL VALUES OF DWELLING IN PRIMITIVE HUT

Taking roots from the notion of Heideggerian ‘nearness’ as an ontological situation of man in his immediate experience of Primitive hut as a built thing which integrates with dwelling, Gaston Bachelard (1994) tries to justify how the twofold dynamisms of imagination and physical experience of place in a primitive hut shapes man’s sense of intimacy through its concrete essences of protection. Bachelard proves that the physical experience of reality is augmented by the threefold of imagination, daydream and memory which goes parallel with the Heideggerian projective identification of places. He believes that all these images may derive from specific fundamental values shaping an archetype of a primitive hut as an immediate ontic being that man found shelter for himself bounded with the Heideggerian fourfold of earth, sky, mortals and divinities attaining to the core essence of protected intimacy.

3.1 Primitive Hut

Cable (1984) in his book ‘the primitive hut’ describes that, the core idea of ‘primitive hut’ within Heideggerian conception, is in fact to be ‘only’ the built-thing, nothing more. In other words, primitive hut is the minimal ontological response of a ‘built-thing’ to the primordial need of mortal man; taking refuge from the fickleness of nature. Alternatively stated by Guy (2013), the primitive hut brings forth shelter for man through interweaving with fourfold constituents of world during a Poiesis. Therefore, the significance of primitive hut is in being ‘merely’ a response to man’s most primordial need of shelter through immediate daily life build-dwell process.

According to Rykwert (1997), the prominence of primitive hut is in immediacy of build-dwell through contribution of archaic senses; haptic involvement in build action in response to need for haptic comfort.

3.1.1 Taking Refuge from Fickleness of Nature

With regard to the abovementioned, man's lack of control over fickleness of nature brought about the need for shelter. According to Odgers, Samuel and Sharr (2006), the need to take refuge from fickleness of nature is profoundly rooted in man's unconscious chronicle of any attempt to build shelter.



Figure 32. Man Taking Refuge from Fickleness of Nature (by author)

In this sense, Kennedy (2001) brings up a highly significant discussion which was primarily suggested by Gaston Bachelard in 'poetics of space'. There lays a dialectical fact in primitive hut's creation. Man needs to take refuge from the fickleness of nature (frigid wind, rainfall, intolerable sunshine) while simultaneously needs the life-giving donations of nature (sunlight, fresh air). Evidently, genesis of the 'primitive hut' is the ontological response (as a built-thing) to the interaction between abovementioned duality of needs. In this, the crux of matter for Heidegger, was the essence of this response; in which He suggests Poiesis, to be at one with world (Capobianco, 2010).

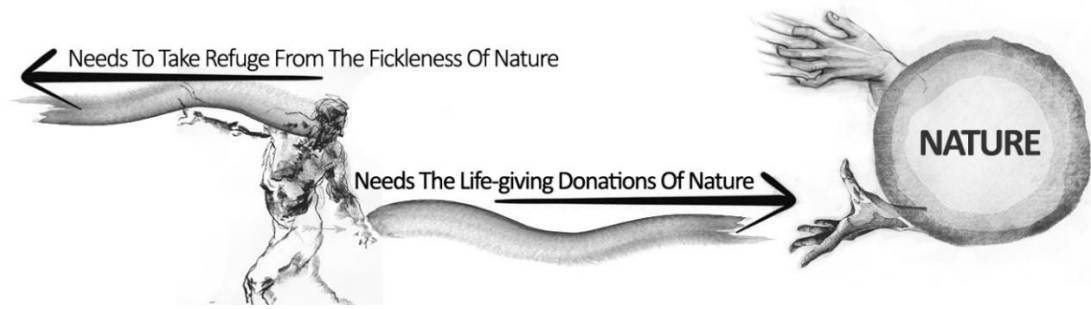


Figure 33. 'Primitive Hut' As an Ontological Response to Dialectical Relation of Man and Nature (by author)

3.2 Hard Core of Beauty

Considering the abovementioned, the significance of 'primitive hut' in Heidegger's philosophy is in 'being-in-one-with-the-world'. In other words, the primitive hut is nothing more than a 'built-thing' which affords man his twofold need of shelter in relation with nature. In like manner Peter Zumthor (2006), discusses on the beauty of primitive and natural things in his book "thinking architecture". He introduces the idea of 'the hard core of beauty'. He argues that a rigid core is laid beneath the beauty of ordinary and natural things, specifically in architecture.

3.2.1 Ordinary Natural Way in Bringing Forth the Built-Thing

Zumthor alludes to a quote of William Paley on 'natural theology' stating that a machine consists of no redundant fragments (Paley, 1850). in continue he explains that the concrete core of beauty in a thing is laid underneath the raw, ordinary natural way in which the thing is grown and brought forth not for demonstrating any superfluous aesthetic message but only for the sake of its immediate use through human daily life. He refers to William's disappointment of contemporary human's disability to discover the origin meaning of things. Here, according to Matthew Mindrup's interpretation in (2015) 'The Material Imagination: Reveries on Architecture and Matter', Zumthor uses the verb 'dis-cover' intentionally in order to refer to Heideggerian notion of

unconcealment of things as a consequence of fundamental phenomenology through the way of meditative thinking which is mentioned earlier in this study.

3.2.2 Materiality and Time

One of the significant experiences while living in primitive hut is appreciation of time passage through the aging of materials within the space. As the materials used in various places of primitive hut get older with all the nostalgic memories inscribed in them, dwellers satisfy with recollection of his being in time continuum (Cable, 1984). However, today's standard construction suffers from the loss of sense of materiality, due to the use of manufactured materials with seemingly ageless appearances such as plastics, glazed metals, and sheets of glass instead of natural materials like wood, brick, and stone, with slightly rugged and asymmetric surfaces that express their age and history of construction and use, and induce a sense of veracity of matter. This architecture attempts to conceal the continuum of time and the process of aging by avoiding the temporal sense that a patina of wear can bestow upon the appearance. This impulse to avoid wear and age is rooted in the fear of death (Pallasmaa, 2011).



Figure 34. Appreciation of Time Passage through the Aging of Materials within Space (by author)

3.2.3 Staying Close To Things Themselves

Zumthor points out that William's poetry is bred only through concentration of self on the things themselves with no augmented notion. That is 'bringing forth', a pure '*poiesis*' which is the way to dis-cover the concrete core of something. Henceforth Zumthor broach the notion of 'nearness' in which he discusses on staying close to the core of things themselves. Accordingly, in the case of a built-thing (dwelling), he seeks for the forces that bring forth the concrete concentrated substance concealing the beauty beneath the superficial shell. Furthermore, according to Dongyang (2010) arguments, Zumthor is on the idea that specially in case of architecture, the built thing should be an attempt to response to the rudimentary forces arising from the location of the thing. Consequently, architecture as a response should be the gathering point for these primordial forces.

3.2.4 Primitive Hut Gathers

Here the word 'gather' conjoins his debate to Heideggerian concept of 'gathering' in the hypothetical bridge which gathers the fourfold. As revealed before dwelling to Heidegger is to build in the manner that building (verb) gathers the fourfold and this is merely reached through the manner of meditative thinking. He emphasizes on a kind of releasement to things, to await the fourfold. For Heidegger to dwell is to accept to be on earth and under the sky, to orientate the self, depend on earth and sky as a mortal who awaits the divinities in a daily life. Also, Zumthor notes that by occupying oneself with the hereditary "laws of concrete natural things like mountains, wind, sun and water" in bringing forth a built thing, there is a chance to gather the primordial forces of the site in order to outgrowth the core of the beauty in things, the dwelling which is the emanation of the core reality of things (Jia, J. J., Liu, S. F., & He, X. J., 2013).

3.2.5 Primitive Hut as Poiesis

Heidegger discussed on this defining-moment as *poiesis*, in which the *bringing forth* happens. He gives an analogy and describes it as the moment of a butterfly's breakout from the cocoon (Halliburton, 1981). bringing forth is an unconcealment, the unfolding of the concrete core of things in the manner of becoming something else (in this case a built thing) and this merely happens through a releasement that accepts and awaits the fourfold (Heidegger, 1971). Ergo, by dint of gathering the fourfold (or Zumthor's primordial forces) in an immediate build/dwell the concrete core of beauty is emerged within the built-thing.

3.2.6 Factual Relationship with the World

Furthermore, as stated by Platt & Spier (2010), Zumthor refers to a state of wholeness in creation of architecture and criticizes the erasure of divinities from our contemporary everyday life as one of the fourfold which once gave meaning to things. He gives credence to the idea that there's a presence through an immediate endeavor to bring forth a built thing that grasped the integrity, which is akin to the presence existing in the realm of ordinary and natural things tied with man's daily life (Zumthor, 2006). This justification brings to mind the Heideggerian notion of *Da-sein* (Heidegger, 1962). Accordingly, he concludes that "the truth lies in things themselves." Then he brings up the term 'factual relationship' to justify that the only way to grasp the hard core of beauty in bringing forth a built thing, is an immediate build/dwell through a presence in which the primordial forces (the fourfold) are gathered in a factual relationship. Consequently, the outgrowth of this circumstance is a built thing which is a being itself, nothing more, not representing or symbolizing any redundant message or superfluous aesthetical demonstration but underlie the concrete core of beauty.

3.2.7 Silence

On the word of Platt (2010), Zumthor believes that this concrete core of beauty brings a silence into the atmosphere of the built thing. Zumthor mentions this point while criticizing contemporary so-called masterpieces which suffer from lack of silence, the buildings in which we are constantly facing an inevitable monolog. Zumthor talks about the silence which is significant for the philosophers of metaphysics and phenomenologists (Zumthor, 2006).

Thrownness of Man

Primarily it is necessary to introduce Heideggerian notion of 'Thrownness' (in german: *Geworfenheit*). In fact the idea of 'being thrown' for Heidegger is a concrete response to his most ontological question of 'how is man's being on earth?' Thrownness describes that man at the moment of birth is thrown into earth in a factual arbitrary way. He argues that arbitrariness is tied to nature of Dasein in essence, even in the moment of birth on bifold of 'being' toward 'non-being' there is no choice for man in this and this circumstance goes on like a domino through the whole life (Heidegger, 1971).



Figure 35. Thrownness of Man into Being (by author)

Primitive Hut; the Calm Corner of the World

Bachelard believes that man rests tranquil in the cradle of house after being-thrown in earth. To him house is the calm corner of the cosmos, thus, in this way man finds home as his first and foremost refuge to evade from this non-chosen arbitrariness for a while. Bachelard reveals that in our reveries house is a large cradle of serenity and the warm embrace which is sheltering him against the fickleness of nature (Bachelard, 1994).

Alternatively deduced by Halliburton (1981), the Dasein who is experiencing thrownness is restlessly in rummage through the non-I world of things. Human being is engaged in a non-stop dialectical game between the I and non-I. In this sense, philosophers of consciousness assume that there is a constant arrow of consciousness from I to the world of non-I, which this circumstance brings man a state of fervor. As Bachelard mentions, man is unceasingly in fervor. A kind of dysphoria leads the inflamed existence of man to seek for loneliness. The space dwelled in loneliness refuges man by virtue of calmness.

This point sheds light on Zumthor's intention for the 'silence' in a built thing, the silence which is experienced through the 'way' of building/dwelling, the silence which is heard from the concrete core of beauty in a built thing. This silence create a moment of suspension so that the Dasein can feel the own presence, the self. That's the moment when the arrow of consciousness bends back to I rather than non-i. Thereby this silence in the house will donate loneliness to man. The primitive hut in which Bachelard is talking about contains spaces of intimacy and is near to one's presence so that he can feel his own being, his loneliness (Freytag, 2017).

In Our Reveries
House is a Large
Cradle



Figure 36. In Our Reveries House Is a Large Cradle (by author)

3.3 Protected Intimacy

Bachelard refers to the ‘protected intimacy’ in order to touch the concrete roots knotted to poetically dwelling.

In the light of Heidegger’s linguistic justifications, this study interprets words through etymology. According to Merriam-Webster dictionary, the word ‘protect’ comes from the Latin *protegere* made of ‘pro’, before and *tegere*, to cover. That is to say there’s an amphibology here. The word protected in one hand may refer to the essence of shelter as an ontic being which is to give refuge to human being from the fickleness of the outside world and keep the intimacy within itself (Barbaza, 2003), on the other hand may refer to the nearness which is covered and hidden underneath the core shades of the dwelling, waiting for the unconcealment to a meditative mind who awaits the mystical world poetically through reveries (Parker, 2001).

Bachelard asserts that it is not sufficient to solely describe the house and evaluate the significant aspects of it, we need to go afar description. Accordingly, he brings up the question that is description indicating the whole true values of the house? The

fundamental values of the house could be appreciated only through the whole truth. Truth reveals the attachment which is concealed beneath the act of dwelling (Bachelard, 1994).

According to Bachelard the mission of a phenomenologist is to discover the original shell of the house whether it is the most sumptuous or the most indigent. Phenomenologist seeks to reveal the deepness of the truth which is hidden under the most fragile shades of an immediate attachment to the core archetype. That is to say Bachelard's main concern was the way man roots in a corner of the world day by day. Here for Bachelard corner is the metaphor of comfort and calmness as a consequence of protected intimacy that shelters man who faced with the fickleness of nature and enables him to dwell in peace. He intentionally refers to the Heideggerian rootedness of human being as a repercussion of dwelling which is bounded with the fourfold (Bachelard, 1994).

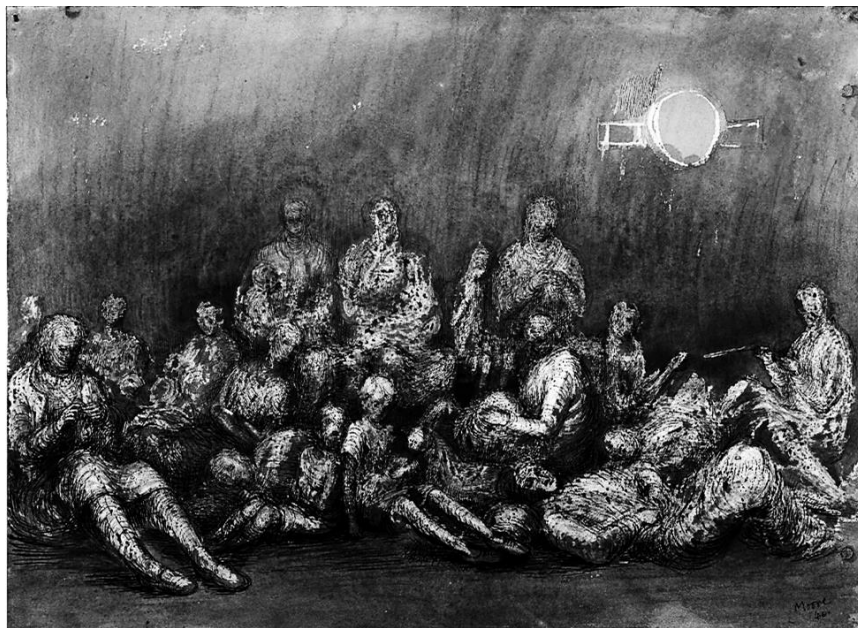


Figure 37. Protected Intimacy by Henry Moore OM (Moore, 1996)

3.3.1 Reverie; Augmentation of Physical Experience

According to Kennedy (2013), Bachelard believes that the latent fundamental values of intimacy underlain the shell of primitive hut, are deeply interweaving with reveries in the primitive hut. In Bachelard's conception, living within the primitive hut involves augmentation of immediate physical experience with reveries. In this sense Harris & Bachelard (2011), describe that this augmentation of man's presence occurs through interplay between memories and imagination inscribed in place. According to Relph (2016), many fundamental memories (specifically childhood related ones) interlocked with the ontological dimensions of dwellers, are carved in different places of home. Accordingly, as time goes by, dweller will face with physical traces of the memories and due to this, new imaginations are created depend on old memories and this chain reaction goes deeper and deeper.

Remarkably, by scrutinizing above mentioned sentence, origins to Heideggerian definition of place can be derived. As mentioned before, Heidegger studies the notion of place through etymology in which he reaches to the German word "versammeln" containing multilayer of meanings such as: to collect, to bring together things or to concentrate on thoughts (Harman, 2011). Then he describes the moment when the hypothetical bridge is not built yet. He emphasizes that before the emergence of the bridge the place does not exist there. So before the construction of the bridge there maybe lot of locations alongside the river but merely one of them becomes the place of the bridge just by dint of the presence of bridge itself. The decisive moment for Heidegger was the moment in which the constructor chooses that location for the bridge. He calls this, the moment in which dwelling is embedded in place by virtue of building. This is what christian norberg schulz designates concretization of space

(Norberg-Schulz, 1990) and Simon Unwin terms Identification of space (Unwin, 2014).

3.3.2 Primitive Hut; Shelter for Reverie

Van & Lyssiotis (2002), state that the dreamer tries to gather his presence through moments identified with enclosed, simple and bounded spaces in home, the spaces which are not in hunger for expansion but yet waiting to be dis-covered, like a warm cradle awaiting the fretted infant, to discover its serenity.

Philosophers in the realm of consciousness and phenomenology are seeking to discover the mysteries underling the dialectical games between self and non-self. For them the cosmos is the horizon outside the boundaries of dwelling, the dwelling which is man's primordial resting-place. For phenomenologist, the inception of the reverie gives tangible evidence of the significance of the dwelling, the ontic presence of non-I that shelters the I. Bachelard believes that there's an underlying archetype containing the concrete values of a shelter for every built thing in which man dwells (Halliburton, 1981).

For Bachelard the essential value of shelter is to refuge the dreamer. Dwelling is the shelter for reverie. He maintains that imagination like a human being seeks for the humblest shelters. Reverie is a being who needs to embody its refuge in order to quench in tranquility (Bachelard, 1994). That is to say, for Bachelard imagination and reverie are like beings who experience the concretization of space and as he alludes imagination seeks for shelter, to concretize its refuge in order to dwell in peace in that place, in the place of that memory or dream.

Bachelard believes that in the places, in which we experienced events, we gather our memories and that place becomes the place of that memory (identification of space). But the key point is that gradually and unceasingly in the place of that memory, new reveries come together and fuse in each other and becomes the collection of our being in time, to that end, the places of refuge for our memory, dream and imagination touch immortality. That's the moment in which the presence of man's imagination, memory and reverie dwells in that distinctive place and that's why Bachelard believes that the dreamer needs to concretize his refuge to quench in tranquility. Because it is only by virtue of Heideggerian poetical dwelling (verb) in which peace is possible (Harris & Bachelard, 2011).

Accordingly, Bachelard justifies that house is a significant constitutive blender of the twofold forces of imagination and memory. Shelter is the embrace for human presence in which being and time mingle. Past, present and future generate different dynamisms of memory/dream to house in confronting with daily life.

3.3.3 Significance of Corners

Back to Bachelard's (1994) notable quote:

“Man roots in a corner of the world day by day.”

In Bachelard's standpoint, existence of corners in primitive hut is the metaphor of comfort and protection involving intimacy. Corner and nooks shelters man's reveries of comfort and security, who faced with the fickleness of nature and enables him to dwell in peace (Bachelard, 1994). According to Mindrup (2014), primitive hut contains corners which invite dweller to curl up securely. Phenomenologically, snuggling belongs to inhabitation. Accordingly, the place which is unable to involve snuggling, do not encompass a complete inhabitation. As we think about our home, within the

deepness of our unconsciousness, there's an image of a warm cradle. A concrete nexus is laid beneath the feelings of our naked skin and the immediacy in sensory perception of house. To feel at home in contrast with the sensations related to the outside world is an intensive immediate sensory experience, which is directly appreciated since childhood through sensory stimulation and linked to the deep experience of intimate warmth in unconsciousness (Kennedy, 2011). Accordingly, the dreamer tries to gather his presence through moments identified with enclosed, simple and bounded spaces in home, the spaces which are not in hunger for expansion but yet waiting to be discovered, like the dimmed corners in a primitive hut. The places which sensation of home and tactile pleasure are interwoven.



Figure 38. Man Roots in a Corner of the World Day By Day (by author)

3.3.4 Dim Vision, Experience of Reverie

Considering the abovementioned, Relph (2016) describes that the dimmed corners and shadows play a very important role in augmentation of home experience with reveries. In this sense, Pallasmaa (2014), notes to significance of deep shadows and darkness in dwelling space. He denounces the dominant ocularcentrism in contemporary era. it is worthwhile to briefly review the critics on ocularcentrism in contemporary era.

3.3.5 Critics on Ocularcentrism and Domination of Eye

Human's nature as a visionary being and the psychosocial effects of his everyday visual experience are predominant but rarely discussed aspect of his existence. The brutal effect of vision and its tendency to dominate the culture by exploiting the drive for autonomy is best described in Levin's book 'Modernity and the Hegemony of Vision' which indicates that Vision has a desire for domination and power. Vision unceasingly tends to grasp and fixate (Levin, 2008). Throughout contemporary era, vision has been extremely promulgated in every aspect and consequently an ocular hegemony has been emerged over the technological character of today's culture. Epistemological analysis of the senses can contribute to understanding and criticism of our architecture and culture, as their ocularcentrism and consequent dominance of vision over our sensory system, mostly at the expense of hearing and touch, has undermined our contemporary architecture, causing it to induce a sense of solitude and detachment (Jay, 2009).

According to (Pallasmaa, 2011), this effect has also been reinforced by the influence of technology on our life and our choice of construction materials and methods. The examples of this sense of detachment are prevalent in urban architecture but are mostly evident in the contemporary spaces that are more intertwined with technology, such as airports, hospitals, etc. Ocularcentrism has been the origin of many magnificent and inspiring works of architecture, but the ocular bias that privilege vision over other senses is making us more detached and isolated by severing our sensory bonds with the world. Perhaps, it is this unidimensional emphasis on vision as a representative of intellect and neglect of other senses -which can evoke our memories and stimulate our imagination- that has undermined the efforts of modernism to appeal to public.

The reinforcing effect of modernist culture and thought on already historical dominance of vision over other senses has been discussed by many scholars but particularly Heidegger, Foucault and Derrida, who have acknowledged the notable rise of privilege of vision since the onset of modern era. Recently, the immensely rapid technological progress has provided the humanity with means to constantly produce, manipulate, and proliferate images, which have only strengthened the hegemony of the eye and led to realization of Heidegger's prediction that the fundamental event of the modern age will be the conquest of the world as picture (Melville & Readings, 1995).

Images as Commodities in Space

This technological progress has improved the ability and reach of our sight to the limits of space and time and has adjoined our experience of space and time into a state that has been described as reversal of time and space, temporalization of space and specialization of time, or "time-space compression" as David Harvey puts it. This new dominance of sight stems from its uniqueness as the only sense that can keep pace with the speed of technological world. Accordingly Harvey have likened the images to commodities (Harvey, 2000).

Ocular Architecture versus Haptic Way of Building

In traditional cultures, architecture is not dominated by the sense of vision; it is inherently linked with the body as a whole like the way a nest is linked with the body of a bird instead of its vision. Many clay and mud-based vernacular architectural works are linked less with vision and more with tactile and haptic senses. The replacement of haptic sense with vision as a result of modernization of these architectures can be described as a loss of intimacy, synthesis, and plasticity. In the case of Western architecture, this loss of elasticity and dominance of vision are quite noticeable. In

Greek architecture for example, designs traditionally had an intrinsic objective of appeasement of vision but also had an authoritative weight and a sense of materiality that implied the entanglement of other senses, so vision was acting as a medium for coming in touch with tactile and haptic senses. Today's architecture often neglects this ability of vision to incorporate and reinforce other senses and the tactile aspect of vision that is clearly evident in historical architecture (Kleinberg-Levin, 1999).

However, it was in the current era of universal visual deluge that concentration on vision became synonymous with rejection of other senses. As the notion of bodiless observer disseminated, vision started to dominate the field of architecture, both consciously and unconsciously, and technological extensions of the eye and bombardment of images encouraged this observer to subdue other senses in favor of sight and loosen all links with the environment except those that governed by the vision. The facts that Modernists have greatly contributed to ocular bias and elevated the dominance of vision as a flag of Modernism are clearly evident in Le Corbusier's statements such as: "I exist in life only if I can see (Le, C., & Benton, T, 2015)". The most ostensive manifestations of ocularcentrism in architecture have appeared in the recent decades with the rise of an architectural taste that seeks to create an unforgettable visual image. This task of creating an instantaneous visual shock, which can be described as a commercial mindset, has transformed the works of architecture into insincere image products that are devoid of any existential depth and plastic and spatial experience.

With the loss of plasticity in architecture, its language became exclusively concentrated on an isolated sense of vision, devoid of bodily aura and tactile sensibility. With time, it started to replace those elements that are more in touch with

human hand, and by extension with human body, with unreal and insincere sharp-looking details, in order to create a visually pleasing -though materially unauthentic-stage. This has led to the loss of what Walter Benjamin calls the sense of aura and authority of presence while describing the integral qualities of authentic art. In this architecture, the signs of construction process are purposefully suppressed to make a glossy spectral look and reflective glass is used in support of this unrealistic and isolated appearance. This glassy appearance however cannot make a real impression on spectators as it fails to stimulate their imagination in regard to the life behind it.

3.3.6 The Significance of Shadow

Pallasmaa in his book 'The thinking hand' describes that vision is involved with detachment and distance while the experience of immediacy, intimacy and nearness brought about through tactile sense. The traces of this fact become apparent when one closes the eye during the emotional excitations in order to dim the separating sense of vision. Accordingly, closing the eyes has become the sign and symbol of dreaming. Moreover, individuals prefer to close their eyes while caressing their beloved ones. According to Kennedy (2011), shadows and intense darkness are vital for man's reveries. Experiencing deep Shadows in corners of spaces involve tactile fantasy. In this sense, Pallasmaa (2014) refer to the mysterious experience of walking along a dim street in an old town while the sequential realms of light and darkness mingle imagination and reality together. In other words, shadow and diminishment of sense of vision are vital to stimulate reveries. Homogenization of light in space declines the experience of being in space.



Figure 39. Significance of Shadow (by author)

3.4 Chapter Summary

To get the meat of the issue, this chapter mainly discussed the ontological significance of primitive hut and the respective 'Conceptual Layers'. In the first step, the genesis of primitive hut as Heideggerian built-thing was studied; the 'built-thing' which is the ontological response to the interaction between men's twofold contradictory needs; Man needs to take refuge from the fickleness of nature while simultaneously needs the life-giving donations of nature. Accordingly, two main values of primitive hut has been studied within second and third section throughout the key literature. The second section titled 'hard core of beauty' discusses the core essence of the beauty in ordinary natural built-things. This section justifies that the 'hard core of beauty' in primitive hut makes man rooted to his own being-in-the-world as the 'non-I' which protects the 'I'. The third section mainly sheds light on the value of 'protected intimacy' in primitive hut. Describing the way in which the immediacy of physical experience is augmented by twofold of imagination and memory only if the hut provides corners and deep shadows for dweller to curl up and bear reveries. The following (Figure 40) is a run through of this chapter.

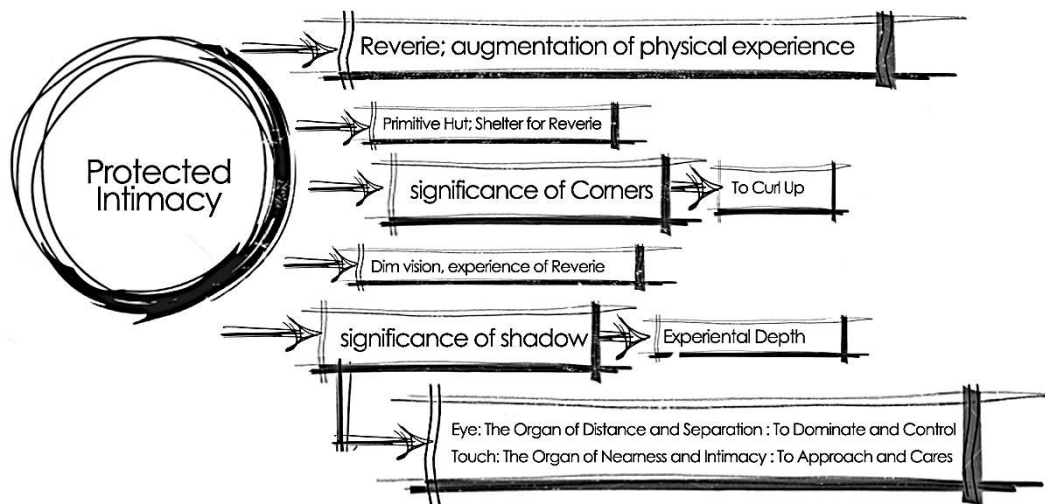
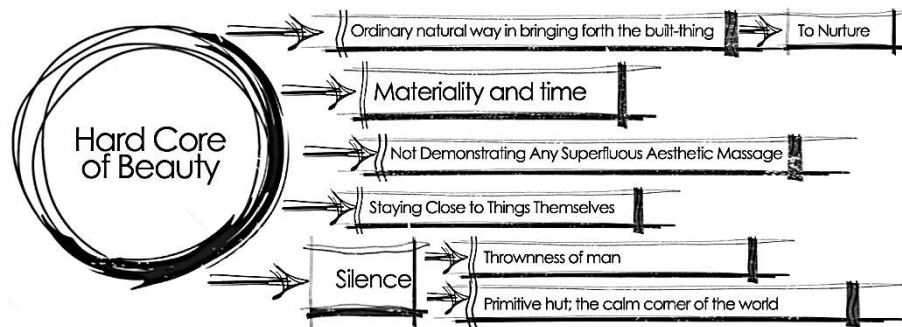
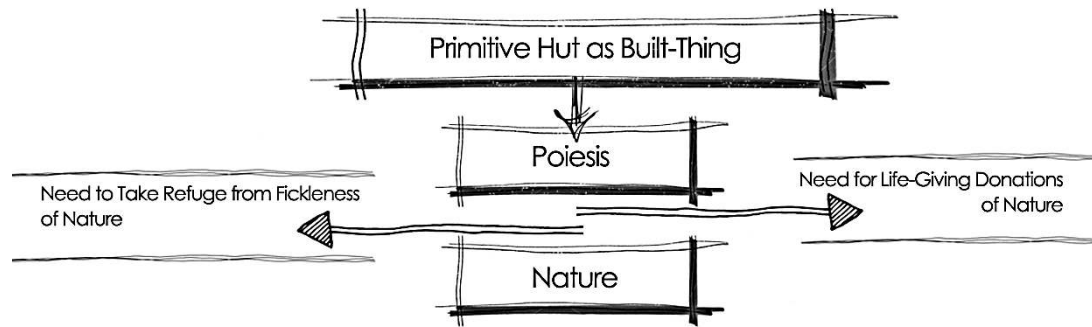


Figure 40. Ontological Values of Dwelling in Primitive Hut (by author)

Chapter 4

A THEORETICAL BACKGROUND ON ‘WINDOW’

According to Meiss in his book “Elements of Architecture”, If dwelling is conceived as a living thing, then absolutely window is the eye, the eye that twinkles to the exterior bystanders to avow that there is a life inside, the eye which lets the mind of the inside perceiver to appreciate the cosmos outside the house and simultaneously conceals the dweller from easily being scrutinized by outsiders.

The window, the gate by which the dweller can feel the passing of time, the aperture that lets the life-giving rays of sun to involve the dweller in consecutive cycle of day and night, the inlet to donate the inflow of fresh air to the inside dweller and from time to time the place which stores the memories of dialogs between two worlds of outside and inside or even as a cache of nostalgic feelings about the smells once came from the rear window (Meiss, 2014).

On the other hand, through the structural scope, the window can be defined as a hollow frame within wall’s physical solidity, and consequently the critical zone of susceptibility, brittleness and thermal permeation. Manifestly Meiss believes that window is the influential mediation element between what is called inside and outside. In fact, dwellers receive almost all their sensory information about the world outside the house through its windows (Meiss, 2014).

Following is a brief theoretical review on window through three main scopes of ‘Spatial Definition’, ‘Design Principles’ and ‘Transitions Through Time’.

4.1 Window as Element of Spatial Definition

Frank Lloyd Wright in his book ‘the destruction of the box’, describes window as the major nexus between two realms of inside and outside adjusting the boundary between them by dint of essence of shelter. He describes windows as the voids within the solidity of walls, causing the confined space to flow (Wright, 1987). In this regard, various architectural theorists throughout history, concerned with definition of space, have taken into account the substantial influence of openings on defining the characteristics of the space encompassed within an enclosed built environment. Therefore, in the first place, what follows is a brief review on literatures concerned with definition of space.

4.1.1 Definition of Space

The concept of ‘space’ is of the terms easy to conceive in practicality of daily life, yet difficult to define theoretically. Fundamentally, conception of space is interwoven with the conception of being itself, since it is felt and used even before apprehension. In this sense, Rudiger Safranski (2002) analogizes this to the study of free fall principles, whilst free falling. As specified by Norberg-Schulz (1990), every being’s being is encompassed with space and time. In other words, space, as an infinite vacancy, holds up everything within its continuum. Accordingly, only by dint of the being of things within space, the conception of space is possible. Interprets that space is the infinite void which is perceived through existence of finite solids within it (Zevi, 1993).

Interplay of Void and Solid

According to Mitrovic (2011), Aristotle characterizes a space as a holder of things – it is a sort of progression which envelopes all in a comprehensive style. Including from

what is 'inside the points of confinement of the sky' to the exceedingly least, rather like the fractal toys made in Russia.

Hence, the emptiness which is bounded outwardly and occupied from the inside can be denoted to as space. As stated by Moore and Allen (1976), Space can never be interpreted as nothingness; because every existing thing coincides with a locus, situation, and placement. factually, through architect's perception, the void or the emptiness surrounded by confining elements of architecture like floor, roof and the wall panels all around, is not mere non-existence, conversely: the fundamental genesis of architecture is hollowing the solidities in order to embody man, the embodiment which gifts hospitality to man and enables him to freely move as it is desired (Court, 2003).

Architecture is the technique of vacancy by perforation of the concrete matters according to Rehm (2002) in his book entitled the 'play of space'. It is considered both from the inside and from the outside; physical boundaries of architecture such as walls consist of two sides. We infiltrate it with our body and not just with our brain. Any written report or architectural history must assess this twofold part of solid and hollow in structures. Any architectural design which is outlined or considered just from the outside stops to be an actual design which can be likened to just a stage. And so again, the diminishment in simply the spatial attributes escapes the whole marks and images underlain by its material nature (Pallasmaa, 2013).

Space and Its Boundaries

Antiquated treatises on architecture scarcely speak straightforwardly about space. Their speculations emphasize more on the physical components of the architecture and on their formal characteristics than on the empty vacant space which they encompass.

The level-headed discussion on space started toward the commencement of the 19th century with the German thinker Schelling (1980) in his book 'Philosophie der Kunst'. It developed Polishes concept, empowering him to decode a certain breaking point.

Gullberg (2016) In his book 'Voids and Bodies', refers to Schmarsow's prioritizing of space rather than solidity of objects. Schmarsow highlights that any sort of materializing embodiments within space is merely means to make sense of the non-materialized realm in which man is dwelling inside. Physical embodiment encompassing space bring about what is called architecture.

According to Kim (1999), through experience of the perceiver within any space, not all the points on the surfaces of an enclosed space are the same. In this sense, the points on the edges and specially the points defining the intersections between enclosing planes (points on corners), play a significant role in conception of space and spatial orientation of man. for instance, inside the simplest architectural space, cube, points on corners are the substantial cues for perceiver, to comprehend the space defined within six intersecting surfaces. in fact, according to Edwards (1979), material existence of corners is sufficient for perception of a space, even if the surfaces are eroded to the extent that merely the corners remain. Therefore, with the existence of these essential cues within space, man is able of distinguishing 'inside' from 'outside'.

4.1.2 Openings and Space Definition

As suggested by Moore (1976) the components characterizing the space in which we are experiencing, don't forge a 'picture' yet apply a field of unequal however pretty much adjusted, fields of perceptual forces. The quality of this field is amplified when the constraining structures are integral or unite towards one point, rather than being independent. According to Giedion (2013), the intensity of a perceptual field increases

when the bounding planes of an enclosed space become inclined to a specific point rather than being autonomously arranged.

Pallasmaa (2011) in his book 'the embodied image', asserts that within practicality of existence in every space, we do not comprehend it merely through the filter of ocular stimulation, instead factually, it is a mirror play and integration of all the sensory stimuli which we perceive through our perceptual filters augmented with our memories and previous spatial experiences in our life (Pallasmaa, 2011 & Bachelard, 2013). Accordingly, the truth of spatial experience is different for each individual. Subsequently, an enclosed space is not merely encompassed and defined by visual stimuli of its bounding planes, rather through various perceptual qualities such as haptic or even aural stimuli (Pallasmaa & MacKeith, 2006).

Manifestly the effects of openings on qualities of spatial field can be categorized within three main aspects:

- 'Degree of enclosure' which characterizes generally the formation of spatial field and the extent of its fluidity through the bounding planes;
- 'View' which affects the focus of spatial field within an enclosed space;
- 'Light' which identifies the illumination of spatial field and its bounding planes

Following, reviews three main interpretations in literature, illustrating the effects of openings on qualities of spatial fields in diverse circumstances through three abovementioned aspects.

Openings and ‘Degree of enclosure’ in Spatial Fields; ‘Based on Ching Standpoint’

Francis Ching (2015) in his book ‘Architecture: Form, space, & order’ demonstrates how emergence of opening within an enclosed space may impact the formation of respective spatial fields and consequently affects the ‘degree of enclosure’. Following, is a concise review on his illustrations of diverse possible spatial fields depending on the variations in respective opening.

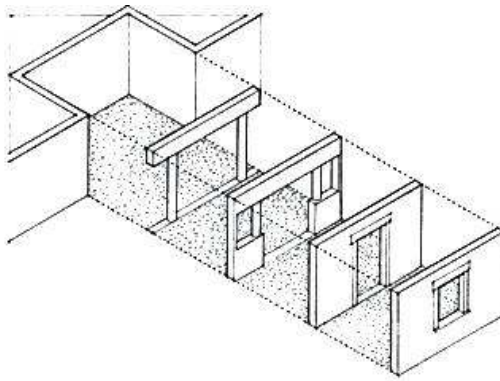


Figure 41. Different Effects of Openings on ‘Degree on enclosure’ in Spatial Fields (Ching, 2015)

Full enclosure

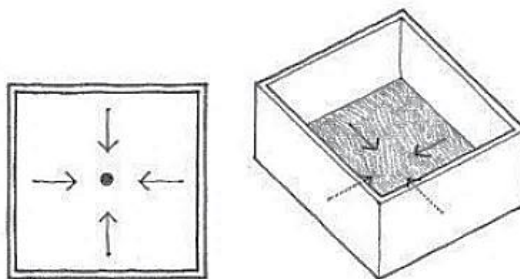


Figure 42. Full Enclosure of Spatial Field (Ching, 2015)

Ching describes that in architecture, the maximum extent of spatial definition on a square plan is obviously four pure surfaces enclosing the interior space with no

opening to outside. In this circumstance, the spatial field is essentially introverted as it is totally encompassed.

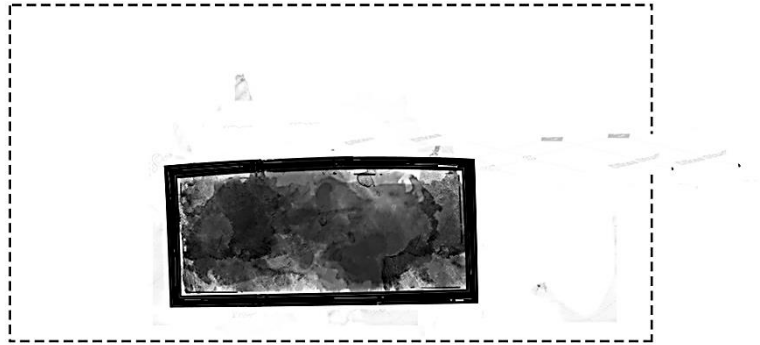


Figure 43. Illustration of Spatial Field, 'Full Enclosure' (by author)

Without openings within the encompassing surfaces, Continuity and connection of spatial fields is not conceivable among contiguous spaces. Windows by virtue of their vacant essence, play the key role in defining qualities of spatial fields, specifically the extent of their enclosure. These openings fundamentally offer the nexus between contiguous spaces as well as may initiate, depending on their dimension and placement, to fade the enclosure of spatial fields. Openings may be placed in different situations in relation to the space defining elements:

Openings within Planes

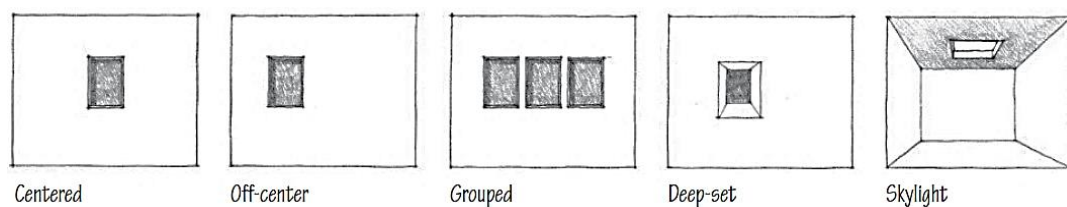


Figure 44. Openings within Planes (Ching, 2015)

The opening may be placed entirely within the plane enclosing the spatial fields and therefore surrounded by plane on all sides. Within an enclosed space containing this

type of opening, spatial field have little flow to outside. Thus this type of window does not highly affect the extent of enclosure in space.

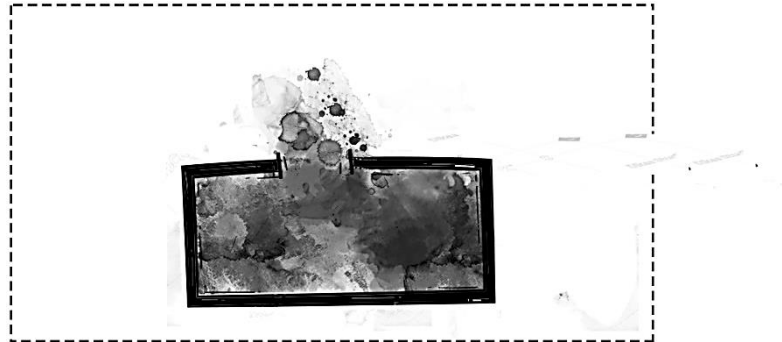


Figure 45. Illustration of Spatial Field, 'Opening within Plane' (by author)

Openings at Corners

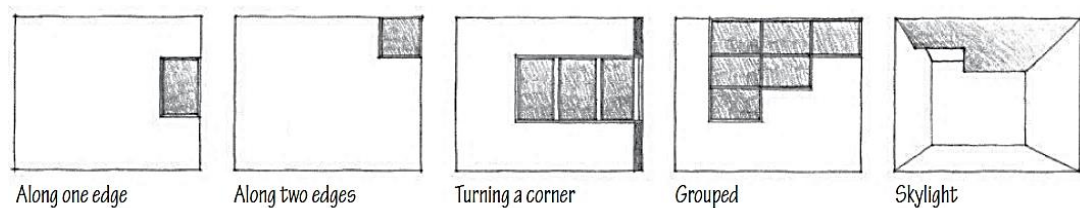


Figure 46. Openings at Corners of Planes (Ching, 2015)

The opening may be situated at the corner or alongside the verge of the enclosing plane, yet still not splitting the adjoining planes completely. The corner openings weaken the definition of corner in space and consequently the closeness of spatial field will be decreased to some extent, specifically when the corner is turned with the opening the spatial field will spread outside the surrounding surfaces. Within an enclosed space containing this type of opening, spatial field have more flow to outside in comparison with the situation of openings within planes. Thus this type of window decreases the extent of enclosure in space.

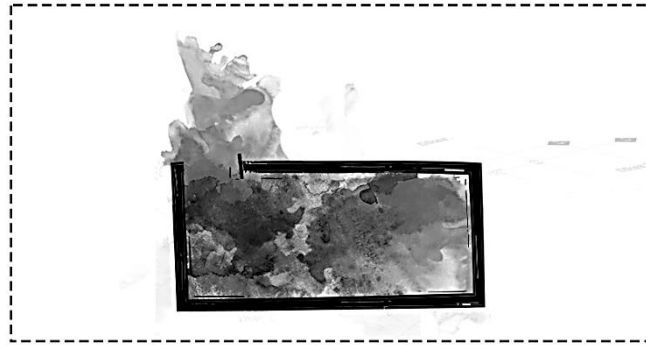


Figure 47. Illustration of Spatial Field, 'Opening at Corner' (by author)

Openings Between Planes

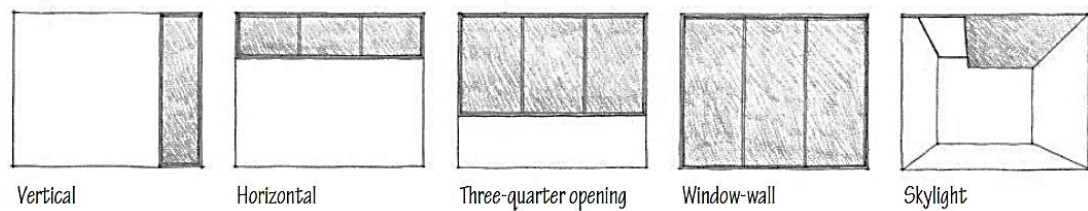


Figure 48. Openings between Planes (Ching, 2015)

The size of the opening may increase to completely separate the enclosing planes of space. It can be a vertical extension from floor to the ceiling surface or a horizontal one splitting two solid vertical planes. This type of opening will affect the amount of enclosure in spatial field and makes it more extroverted.

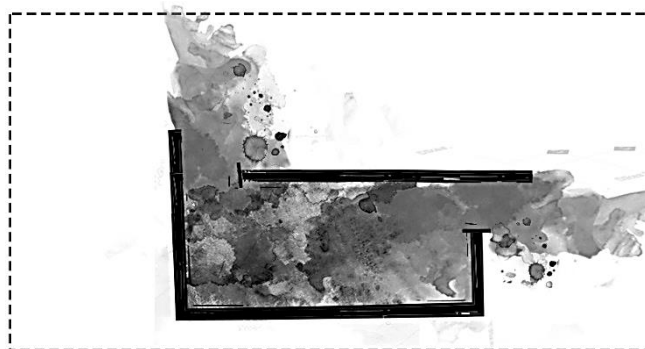


Figure 49. Illustration of Spatial Field, 'Opening Between Planes' (by author)

Window-walls

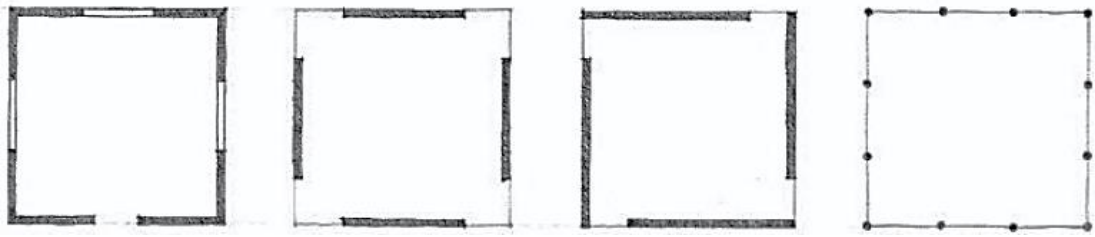


Figure 50. Transformation from Maximum Enclosure to Minimum (Ching, 2015)

In case this type of opening is placed at corner of space, the spatial field will become less defined and even extended to adjacent spaces making intertwining spatial fields. These openings will erode the perception of an enclosed definite space and leads to distinct perception of each enclosing plane. If the opening continues to enlarge conducive to vanish the enclosing plane, then it is called a window-wall. Window-walls cause the maximum extent of fluidity in spatial fields.

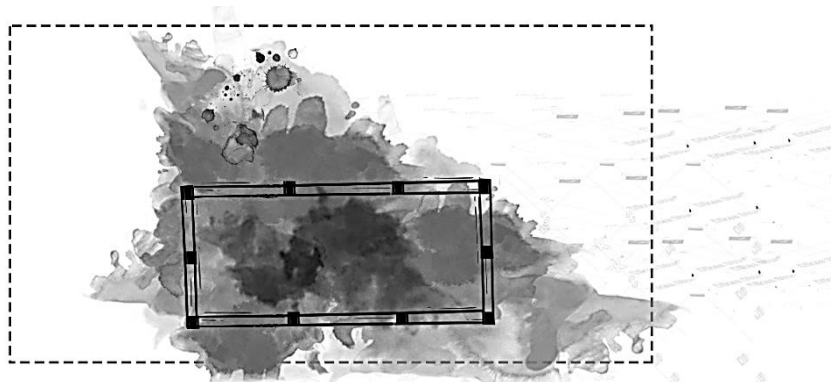


Figure 51. Illustration of Spatial Field, 'Window-wall' (by author)

Openings and 'View' in Spatial Fields; 'Based on Giedion Standpoint'

Sigfried Giedion (2013) in his book 'Architecture and the phenomena of transition' interprets the formation of spatial fields through a distinctive approach. Giedion describes that the genesis of spatial fields is essentially subjective and consequently different for each individual. In his viewpoint, formation of spatial fields depends upon

the situation of perceiver relative to space. In other words, according to the fact that visual stimuli for individual differs in altered locations, thus during the movement of perceiver, formation of spatial field alters accordingly.

In this sense, he refers to the significance of perception of 'depth' in spatial experience. Giedion describes depth of space as an element of spatial definition. Experience of depth in space is essentially perceived through two key indicators. One is through perspective effect which goes along with smaller scale of objects as they become farther and also the gradient effect of brightness on surfaces, the other indicator of depth is the analytical effect of background/foreground perception in which between two objects in a view frame, the one which is partly hidden by parts of the other, is conceived behind the other one.

In light of this, Giedion portrays 'depth of space' as the defining element of spatial fields. He designates that openings within an enclosed space affect the depth of space. That is to say, openings cause subjective spatial fields to extend beyond the bounding planes of space. Likewise, Giedion declares that the subjective spatial fields extending through the depth of space, actually define the view of openings within space. Openings in essence intensify the perception of depth in space, since the void in its genesis reveals the view which is concealed behind solid bounds of space and subsequently the subjective spatial fields deepen outside the openings while the perception of individual in one side expands to the other side of walls. Below, there is an illustration of it.



Figure 52. 'View' Changes during the Movement of Observer Relative to the Opening (by author)

Moreover, as the opening enlarges, the view of the observer to the outside expands as well as the subjective spatial field grows outside the bounded space.

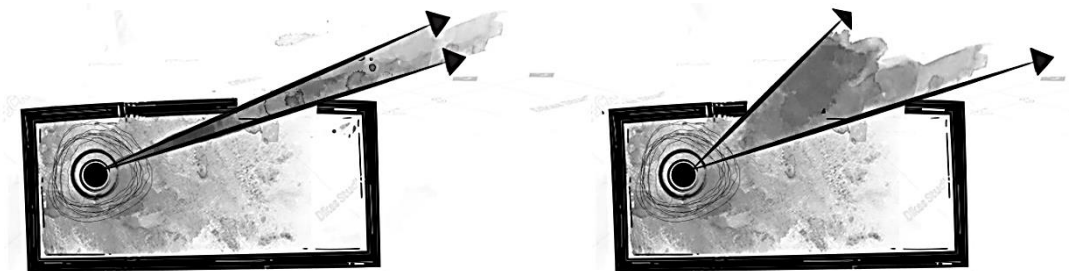


Figure 53. 'View' Changes during the Enlargement of Opening (by author)

Openings and 'Light' in Spatial Fields; 'Based on Meiss Standpoint'

Pierre Von Meiss (2014) in his book 'Elements of architecture: from form to place' illustrates the influence of natural light on spatial fields. In this respect, Meiss applies qualitative interpretations on spatial fields rather than their formation as quantitative factor. Simply put, his illustrations are concerned with the effects of natural light on quality of spatial field.

Meiss defines architecture as the artistic play of light in space by means of openings. In this sense, he describes openings as the medium by which the quality of spatial fields is adjusted. Openings generate an interplay of twofold qualities of light in spatial fields. Through openings spatial fields grasp a gradient of Brightness and darkness

within the encompassing planes. Likewise, openings in space cause illumination and shadow on the bounding surfaces.

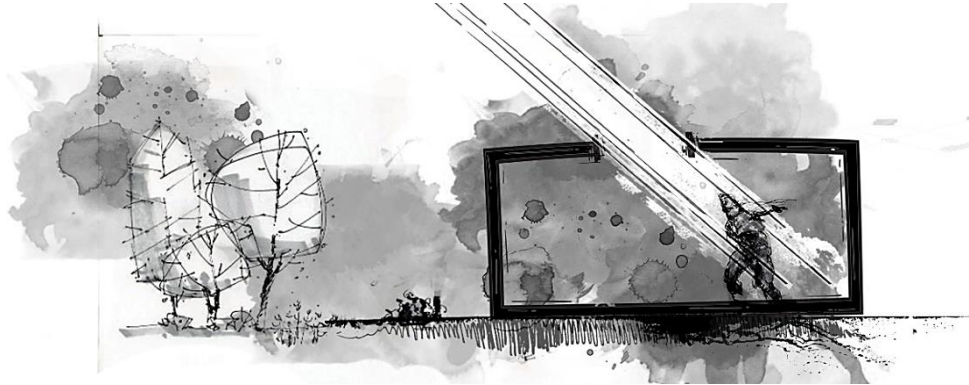


Figure 54. Impact of Light on Quality of Spatial Field (by author)

Furthermore, Meiss explains that as the opening enlarges within the bounding plane, the spatial field becomes illuminated to the extent that there is no more shadow; consequently, the twofold quality of light fades and it becomes invariant bright space.

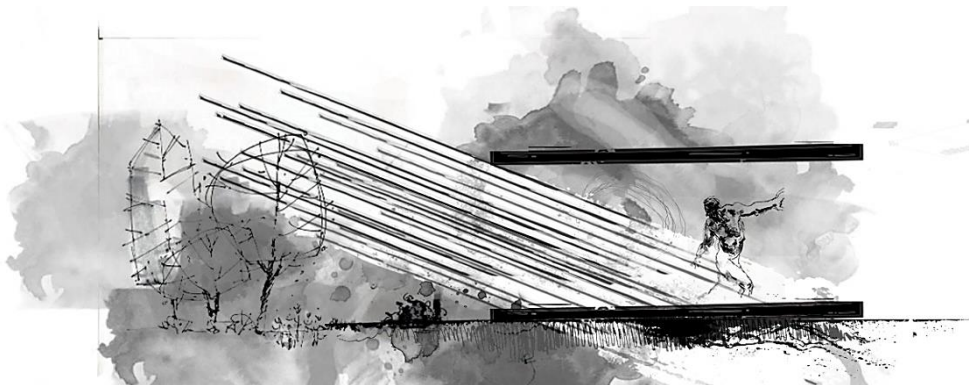


Figure 55. As The Opening Enlarges the Two Fold Quality of Light Fades in Spatial Field (by author)

4.2 Significance of Window in Fundamentals of Design

According to Edwards (1979), since architecture is essentially concerned with creation of an inside and outside, opening, specifically window, is the crux of design issues. In this sense, he maintains that without opening within an enclosed space, dwelling is

impossible. Likewise, Kim (1999) interprets that through window, architectural spaces grasp essential natural components which transforms them into a livable space. In fact, openings are tools for architects to adjust the nexus between inside and outside, and consequently suitable configuration of spatial qualities (Plummer, 2016).

Thus, in Design process, the element ‘window’, embraces three vital architectural fundamentals: the lighting of space, providing view to the outside and ventilating the fresh air within space (Ching, 2015). Following, aforementioned principles are briefly reviewed through two different aspects: the role of natural components in space independent of formation of window and the role of ‘formation of window’ in effects of natural components in space.

4.2.1 Independent Role of Natural Components

McCarter (2016) explains that natural components of architecture provide lighting, ventilation and view as fundamentals of architecture through the medium of openings. He illustrates various effects of these natural components in space. In this regard, it is worthy to review the main items.

Light

Louis Kahn (1994) in his book ‘Light and Space’ considers the role of natural sunlight in architectural spaces. Kahn highlights variations of sun positions during its movement and its respective effects on spatial qualities. McCarter (2016) interprets the effects of movement of the sun on space and notes them as following:

Daily Effects

Due to the daily movements of sunlight and its different situations, the encompassing solid planes and the openings within them take sunlight from different angles and consequently the spatial field will contain different patterns of light and shadow.

Moreover, along with passing of the day from sunrise to sunset, the brightness of the sunlight decreases and gradually the spatial field will lose the quality of brightness.

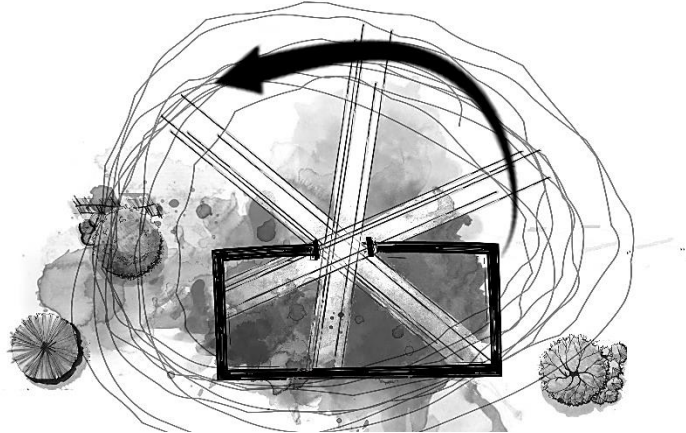


Figure 56. Daily Variations in Shadow-Light Patterns within Space (by author)

Seasonal Effects

Due to the seasonal situations of sun and change in incidence angle of sunlight to the surface, the encompassing solid planes and the openings within them take sunlight from different angles and consequently the sunlight penetration depth varies within different seasons. According to Pilkington Sun Angle Calculator (1975), the maximum solar penetration depth is about 6 meters inside which occurs in winter and the minimum solar penetration depth is about 3 meters inside which occurs in summer.

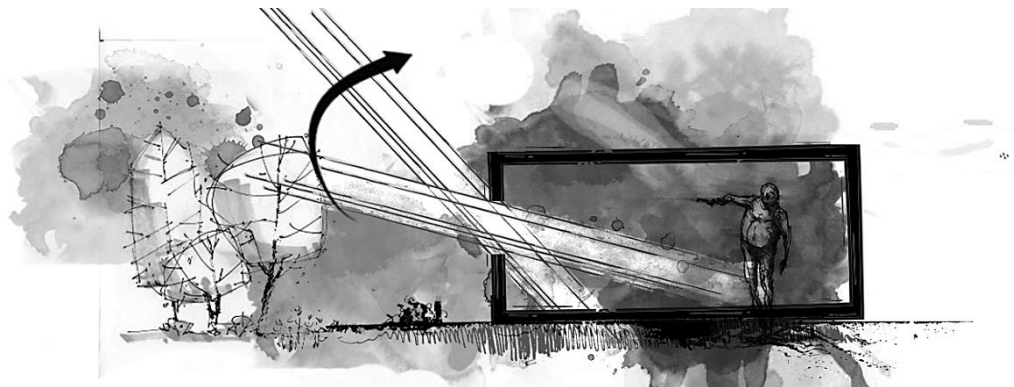


Figure 57. Seasonal Variations of Solar Penetration (by author)

View

Providing view to the outside world is one of the fundamentals of architecture which occurs through openings (McCarter, 2016). According to Norberg-Schulz (1990), openings link the immediate experience of user to the outside world. In this sense, McCarter notes that the key indicator in definition of view is the scale of opening. Opening emerges as a luminous figure, projecting the view of outside world, within a contrasting background, solidity of enclosed space. whereas if the opening begins to enlarge, it will at one critical point stop to be a void within a bounding solid plane and transforms to a positive element which is then conceived as a transparent surface projecting outside, confined by a solid frame.

In this sense, Schinaia (2016) in his book ‘Psychoanalysis and architecture: The inside and the outside’, maintains that along with enlargement of opening within the bounding plane, the conception of outside for the inside perceiver shifts from merely grasping a projection of outside within a bounded frame to the orientation of immediate experience between inside and outside.

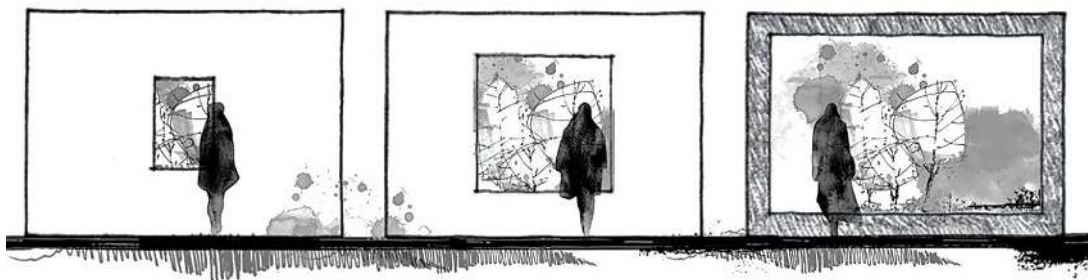


Figure 58. Gradual Domination of outside View through Enlargement of the Opening within Plane (by author)

Ventilation

According to Dahl (2010), flow of fresh air within an enclosed space causes comfort in dwellers. Dahl explains that architects justify the orientation of openings due to involve ventilation through space based on local wind patterns. According to Pallasmaa (2012), ventilation through space causes multisensory stimulation, mainly through tactile and olfaction senses, which brings about a deeper comprehension of outside space.

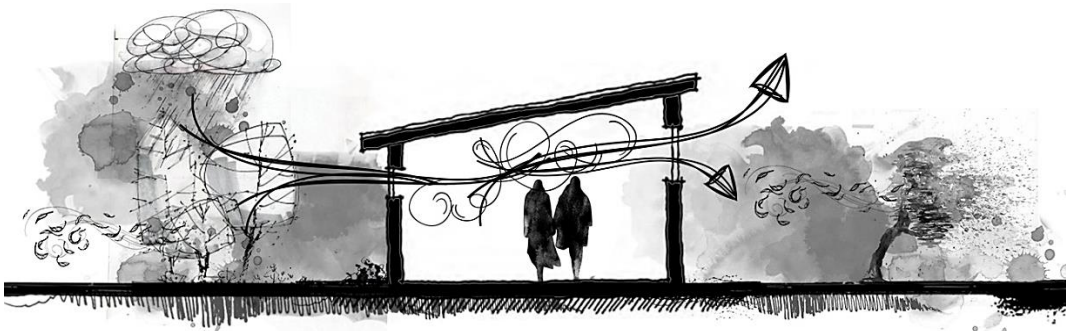


Figure 59. Ventilation (by author)

4.2.2 Role of ‘Formation of Window’

Various types of windows have been devised throughout history of architecture which may vary in material, shape, structure and method of opening due to the specific uses (Collin, 2012). Above-mentioned indicators cause different attitudes of window as medium for the effects of natural components in space. In other words, Different types of windows affect the patterns of lighting, view and ventilation which is generated through penetration of natural components within space. In this regard, a brief review on main types of windows is worthwhile.

Main Types of Window

Randall (2002) in his book ‘The encyclopedia of window fashions’, notes the main types of windows as following:

- **Fixed-glazing window:** fixed window is fixed to its frame and contains no opening operation.

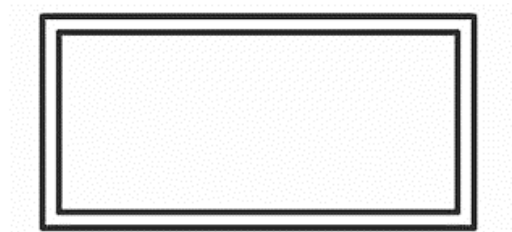


Figure 60. Fixed-glazing Window (Randall, 2002)

- **Casement window:** these type of windows is sort of hinged window which swings horizontally to open. Casement window is effective in ventilating the space.

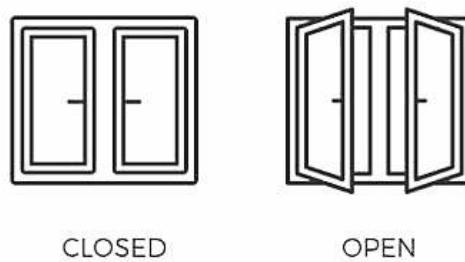


Figure 61. Casement Window (Randall, 2002)

- **Awning window:** this type of window contains hinges and swings vertically to open instead of sliding. Awning windows have more resistance toward weather fickleness.

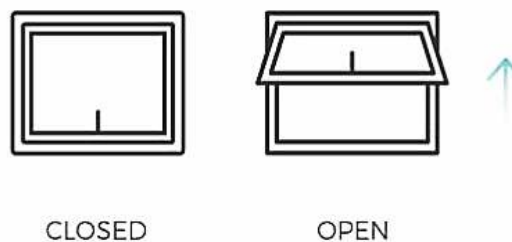


Figure 62. Awning Window (Randall, 2002)

- **Double hung window:** this type of window consists of two shutters which slide vertically within its frame to adjust the sufficient openness.

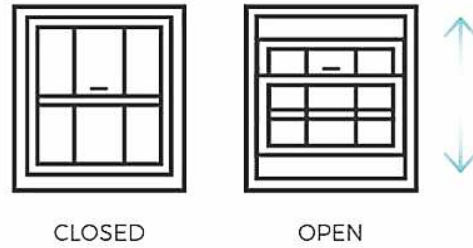


Figure 63. Double Hung Window (Randall, 2002)

- **Sliding window:** sliding windows open through sliding the sections horizontally to left or right side.

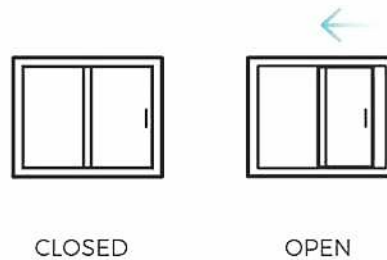


Figure 64. Sliding Window (Randall, 2002)

- **Bay window:** The transparency of bay windows is extruded to outside which presents deeper spatial connection to the outside. Moreover, bay windows bring about dominance of view for dweller.

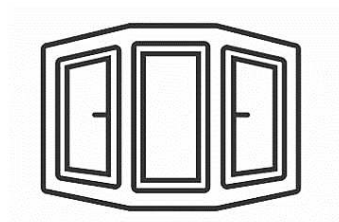


Figure 65. Bay Window (Randall, 2002)

- **Skylight:** these type of windows is not commonly used nowadays due to the verticality of building constructions. The sky light windows grasp the natural components through the roofs within spaces. The shadow light patterns which are generated through these windows are distinctive to other types of windows. Consequently, a unique spatial field will emerge.

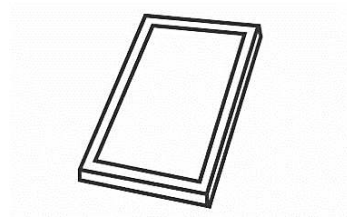


Figure 66. Skylight Window (Randall, 2002)

- **Jalousie:** these type of windows were commonly used in past due to effective ventilation in warm climates. Jalousie window consists of several split horizontal plates which swing to open and close.

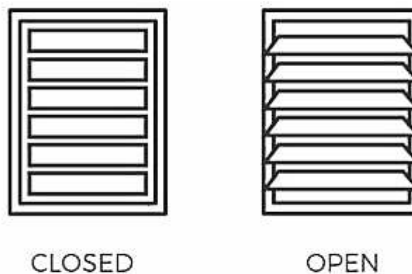


Figure 67. Jalousie Window (Randall, 2002)

4.3 Window Transitions through Timeline

4.3.1 Genesis of Window

The ‘window’ has been transformed a lot in terms of dimension and shape throughout the history of manmade shelters (Lefaivre & Tzonis, 2004). As stated in the book ‘the emergence of architecture’, the nascence of window is rooted in needs of primeval man to natural components of light and fresh air while he was refuged to the depth of

dark enclosed shelter. While primitive man was eluding the fickleness of nature through encompassing the self within the solid enclosed space, he felt the need to delve a hatch through the boundaries to take in the generous donation of nature, light and air (Schatzki & Steiner, 2017).



Figure 68. Ordinary Window in Primitive Hut (by author)

Thus, the first window was actually just a small perforation within the solid bounds of shelter (Hamlin, 1896). Later, the primitive hut contained one modest opening with solid opaque gates mainly made from wood. This single opening simultaneously enabled man to circulate, observe and orientate himself between inside and outside world. Above all, it provided man the life-giving light and fresh air (Roth & Clark, 2014). However, the dwellers were faced with a major obstacle using these openings. If they closed the window in order to prevent the frigid wind they became deprived of the light. Nevertheless, many years later with the production of the transparent glass dwellers had the option to open or close the window without worrying about sinking in darkness (Lefaivre & Tzonis, 2004).

Lefaivre & Tzonis (2004) maintain that up till now the constructional techniques and methods in buildings has been always a decisive factor in shaping the form of windows

in order to adjust the light, temperature and ventilation inside. As stated by Ching (2015) lighting has been a key factor in the formation of many buildings in history suchlike sacred ones. During the Renaissance, a level of transformation has occurred in design attitudes related to the window. Renaissance designers separated the windows for lighting design from those for view through locating oculus windows above the windows designed specifically for the view.

However, the most prevailing window employed betwixt the walls of buildings since the modest hut till now is yet the minimal ‘ordinary casement window’ encompassing three essential architectural criteria in design (Roth & Clark, 2014). In light of this, the ordinary casement window may be defined as the archetype of window shape till now.

On the other hand, notable exceptions exist, such as the horizontal strip windows that firstly emerged in dwellings located in Appenzell of Switzerland since the 18th century. The horizontal strip window was a wise design solution to the need of light behind the walls that much later transformed into the contemporary curtain walls (Meiss, 2014). This was primarily an illustration of design to provide the need for light rather than the view.

4.3.2 Transformation of Window ‘From Ordinary to Modern’

Emergence of steel components in architecture was a helpful tool to have more robust free walls which can be translated to utilize other materials like glass. An emerging architecture method was introduced in the middle of 19th century. Crystal Palace which was designed in 1851 by Joseph Paxton combined the new industrial materials with a greenhouse outline used to emerge a unique glass space (Favole, 2012). Some mature trees surrounded the symbolic 1,851 feet long, internal-wall-free space. This new design defined a new era of structure in architecture.

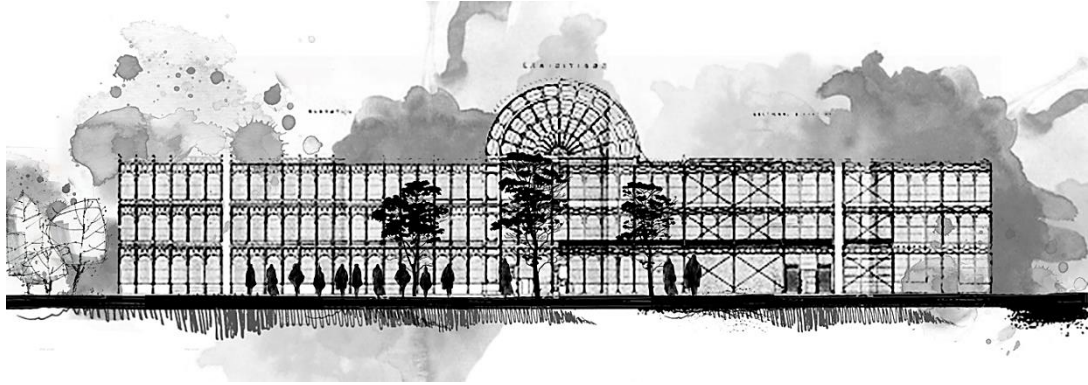


Figure 69. Crystal Palace: Emergence of New Conception of Window (by author)

A newspaper correspondent described the Crystal Palace as a new design which could hide its inside perspective because of low shadows made, and continued and “all materiality is blended into the atmosphere” (Favole, 2012). It means that the separability between inside and outside of the house was discussing.

The inclusion of glass plus mass-produced steel into architecture enabled the designers to better control the light of buildings and was injected into all types including houses, offices, museums, schools, factories and etc. in other words, it was a new phenomenon which led to extensive increment of natural light utilizing. This is a crucial point once knowing that people in cities are staying more and more hours indoors working (Plummer, 2016) and this is not the only benefit. As Plummer claimed, “this revolution was not solely one of quantity, for the rise of new democratic systems and their concern for human individuality brought architects an unprecedented freedom in the expression of light. Such ideas were no longer merely for dogma or propaganda, but could now offer people a range of undetermined experiences”. Another statement was from Walter Gropius, who funded the influential Bauhaus school, which expressed “We want a clear...architecture, whose inner logic will be radiant and naked, unencumbered by lying facades or trickeries” (Gropius, 1965). So the “glass box” started to be promoted.

According to Frampton (2014), after the appearance of tall buildings in 20th century, utilizing the glass materials raised dramatically. Although, the first modern skyscrapers were built with traditional materials and decorations, made the early ones just like classical buildings, the newest modernists and architectures throw away the classical ones and tried to apply industrial aesthetic. Frank Lloyd Wright predicted the ongoing use of glass in architecture in an essay of 1928. His prediction was on the basis of his observation on the new automatic-made glass which was so cheap and desirable that he stated “our modern world is drifting toward structures of glass and steel” (Wright, 1987).

Wright announced that the architectures and the traditional thought had not understood the role which glass could play in modern design due to its new style but it would be the mostly used material in modern architecture in corporation to bronze. He described an exaggerated utopia that would be built if the bronze and glass combined in the future design as a colorful city during daylight and an illuminant one in nights. He proceeds “Such a city would clean itself in the rain, would know no fire alarms – nor any glooms... I dream of such a city, have worked enough on such a building to see definitely its desirability and its practicability” (Hoffman, 1998).

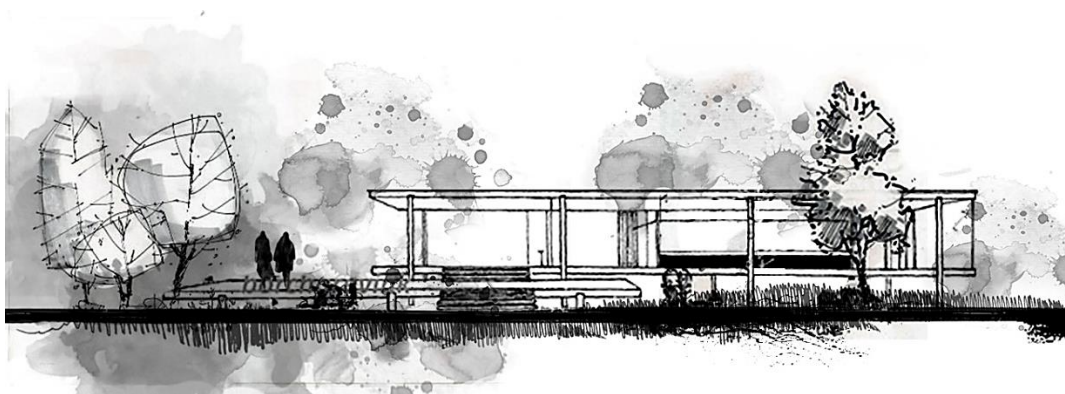


Figure 70. Farnsworth House, Upshot of Utilizing Modern Window (by author)

Moreover, describing his ideal future city, Wright solved the heating and other critical challenges utilizing glass materials. But now, we know that Wright's idea was a kind of exaggeration to glass utilizing and his vision and methods could not be the right respond to our needs and requirements to have a happy life. In new methods and visions, the interior space is a kind of different from its former concept.

Notwithstanding, the consequent multiplicity of techniques and styles in devising spaces derived from the novel freedom in the definition of the boundaries between inside and outside led to a sort of dominant autonomy of technology rather than the picturesque. Pallasmaa (2012) in 'Understanding architecture' maintains that whereas traditional genesis of architecture conceived window as an aesthetically discrete element per se, aesthetical appreciation of the contemporary window is only feasible in light of a comprehensive conception of the spatial blueprint. That is to say, the window is not considered as a discrete element in contemporary mindset anymore.

4.4 Chapter Summery

In general, what this chapter points to through reviewing key literature in different scopes on window, is the trace of transformations in windows 'from ordinary to modern'. In this sense, the evidence indicates fundamental changes in spatial qualities due to the transformation in conception of window.

Generally, in spatial fields, due to the new capabilities of construction, degree of enclosure has been obviously decreased, likewise through vast permeation of outside views within the perceptual realm of inside dweller, bounds of spatial fields have been extended towards outside the enclosed space. Moreover, the level of light penetration inside the space, has been highly increased and consequently the contrasting patterns

of twofold qualities of light-shadow has been gradually faded and transferred into homogeneous spatial luminosity. In other words, the modern window-wall as the medium between inside and outside has been maximized the level of inpouring by dint of enlarging the opening frames to the maximum.

Chapter 5

INTERPRETATIONS AND ARGUMENTATIONS

5.1 Linking ‘Hypothetical Jug and Bridge’ To ‘Window’

Throughout the second chapter, in order to define the truth of ‘Dwelling’, different strands of Heideggerian concepts like ‘thingness’ and ‘fourfold’ has been scrutinized. Thereby a profounder layer of the meaning of ‘Nearness’, has been grasped. Accordingly inferred that in Heideggerian standpoint, the quality of ‘immediacy’ while using ‘built-things’ within everyday life, may cause individuals to appreciate the moment of ‘being-in-the-world’. Consequently, a deeper understanding of ‘Nearness’ is attained; for Heidegger, the quality of ‘Thingness’ brings individuals closer to themselves in order to be engaged with the fundamental moment of Being-in-the-world. Once the factual build-dwell interplay is interlocked with the fourfold, the ‘built-thing’ brings about ‘Poiesis’ by means of orientating man’s ‘being-in-the-world’.

Moreover, as considered before, Heidegger’s main concern was the loss of meaning of ‘Dwelling’ in the contemporary era which is dominated by calculative mind. The Heideggerian concepts which has been studied are in a chain relation leading to the understanding of ‘dwelling’. Heidegger gives two practical hypothetical models of Built-things in everyday life in order to shed light on true way of thinking on the meaning of ‘Dwelling’:

- **Hypothetical Jug:**

In general, what Heidegger by the notion of ‘Hypothetical Jug’ suggests, is the way the jug as a ‘built-thing’ gathers the fourfold and interlocks it with man’s immediate experience through the gift of ‘pouring’ which is brought forth from its ‘nothingness inside’. In this sense, this section seeks the mutual ‘Conceptual Layers’ between Heideggerian Hypothetical Jug and the ‘Primitive Hut’ as the simplest modest definition of house which is essentially created through the interplay of void and solid (Beingness and nothingness) in order to pour the natural components inside.

- **Hypothetical Bridge**

The bridge in Heideggerian conception, is a ‘built-thing’ which ‘brings forth’ a connection; the connection which affords the mortal man a way to pass the stream without locking up the forces of nature. Heidegger’s choice of a bridge alludes to the point that the term ‘built-thing’ comprises any outcome of the interlocked activity of building-dwelling; not merely the archetypal residential buildings. In this sense, this section seeks the mutual ‘Conceptual Layers’ between Heideggerian Hypothetical Bridge and ‘the window of the primitive hut’ as the ‘built-thing’ within a ‘built-thing’, which affords the mortal man a connection to the outside world without disrupting the essence of shelter.

5.1.1 Extracting ‘Conceptual Layers’ of ‘Dwelling and its Window’ as ‘Hypothetical Jug’

This section is the interpretation of Hypothetical Jug, in order to shed light on its mutual ‘Conceptual Layers’ with hypothetical primitive hut and its respective window.

‘Eidos’ of ‘Jug’ and ‘Primitive Hut’

As mentioned before, Heidegger in his essay ‘the thing’ (1967) brings up the platonic term ‘Eidos’, which means what something stands forth, by ratiocinating that

hypothetical jug is made with the void inside in order to hold the liquid within itself.

He infers that the Eidos of the jug is emanated from two facts:

- The way the thing is made;
- How it is experienced through man's viewpoint.

Heidegger interprets jug's 'Eidos' and explains that the Jug is emerged by dint of the void inside it, and man uses it to hold and pour beverages. Accordingly, this study interprets the 'Eidos' of shelter in order to shed light on the essential nexus between hypothetical jug and dwelling (house). In this regard, illuminating the Eidos of shelter, requires a review on the primordial shelters of mankind in history.

Historical Evidences on Genesis of Shelter

According to Rapoport (1991), there are two suppositions about the first shelter of human based on historical evidences:

- The first non-man-made shelter of human was the cave: A delve inside the concrete rocks of earth, in which man takes refuge to, while eluding the fickleness of nature.
- The first man-made shelter of human was a cone tent made of tree branches:
This type of shelter was actually an imitation of the behavior of tree through growing on earth. Man gathered the rigid branches of trees around himself and reinforced the structure by heavy stones on the bottom.



Figure 71. The Primordial Shelters of Human (by author)

Justifications

Notable links to the Hypothetical Jug has been identified by getting deep into the 'Eidos' (essence) of the primordial shelters of human:

According to Heidegger's explanation, a vessel's essence is emanated from dynamism betwixt the matter as Beingness and void as nothingness. In other words, the jug is embodied out of earth and the nothingness inside is the permeation of deep void of sky above the earth. Likewise, as reported by Dripps (1997) in his book 'the first house', the essence of the primordial shelters of mankind was within the cavity inside the solidity of things in nature. That is to say, the embodiment of the cave shelter is made out of earth's midst, and its void is actually the continuum of sky's vacancy inside the shelter. The point is even more apparent in the tent of tree branches; the shelter which is grown out of earth and the void inside is rooted in the emptiness of sky. Considering the state of the mortal man which his being is encompassed on earth under the sky, Heidegger alludes to the 'rootedness of man on earth'; emphasizing on how man's being is interwoven with the fourfold constituents of world in order to dwell on earth in peace. According to Bachelard (2014), this statement of Heidegger is rooted in the depth of man's unconscious memories of shelter.

The crux of matter is the nexus between their essence, the interweaving of void, Nothingness, and solid, Beingness. According to Heidegger, it is the void, Nothingness, within the Jug which brings about to seem as jug for us; to be a 'Thing' that has the potential to hold something else within itself. He underlines that the cavity inside the jug gives it the capability 'to pour' which is a sacred gift; the gift which is derived from 'Nothingness'.

In fact, to be more precise, what gives the jug ability of pouring is not just the void inside it. Indeed, it's both the nothingness on the surface (hatch) and the nothingness within the volume (the emptiness) that gives the jug its ability to both holding the liquid inside and also pouring it out. In fact, without the hole on the surface, the jug loses its ability of outpouring and consequently does not stand forth a jug anymore.

There is an essential difference between the nothingness on surface of the jug and the one within its volume. The nothingness within the volume (emptiness) causes jug to hold the life-giving matter within itself, while the nothingness on the surface (hatch) causes the life-giving matter to pour and flow. Likewise, nothingness is both within the volume (the interior space) and on the surface (opening) of the shelter. The gift of pouring in the shelter is both from outside to inside (inpouring) and inside to outside (outpouring). The gift of inpouring in shelter occurs through two main means:

- Giving life-giving matter: by dint of letting life-giving matters (air-light) to be received by inside dweller (mainly through sensory stimulation);
- Giving immediate experience of the other side.

In this context, it is noteworthy to consider the relative situation of the life-giving matter and man, compared to each other in hypothetical jug and the shelter. The life-giving matter is within the hypothetical jug which is poured out for the man outside the jug, whereas in shelter, man is inside and the life-giving matter is poured inside from outside. That is why in jug, life-giving occurs through the gift of outpouring while in shelter it happens through inpouring. Actually the hatch (nothingness on surface) is the medium of giving; the mysterious giving from nothingness.

Etymology of jug

According to Matthew King (2011), Heidegger applies etymology in order to shed light on the essence of ‘gift of outpouring’ in jug. For the term ‘outpouring’ he considers the German root ‘guß’ which consists manifold layers of meanings beneath. ‘guß’ is mainly describing the English term ‘gush’ which refers to the ‘intense flow out of a fluid’ which Heidegger links it with the rainfall from the vast vacant sky. In this, Heidegger develops connotations with the German term ‘Geschenk’, gift. He refers to the man’s primordial belief in the existence of divinities up in the sky and the ceremony of praying for rain due to the role of divinities in atmospheric events; the pray in the hope that divinities will give the gift of life-giving rain.



Figure 72. 'Gub', Rainfall: Gift of divinities to mortal man (by author)

Besides, according to Williams (2017), to Heidegger the term ‘das Gießen’ implies ‘casting process of iron’ in which Heidegger targets the existence of ‘cast’ as the cause to the creation of a new thing. In other words, without the empty essence of the cast, the melting matter will not become a new thing. Heidegger links this root, to the emptiness of jug and analogizes ‘jug’s outpouring’ to ‘a drop casting of paradise’; an

emptiness which gives the gift of pouring and holding. Besides, the term ‘guß’ also refers to ‘aus einem Guß’ which indicates ‘unification through amalgamation’. Heidegger implies to the role of ‘outpouring gift of jug’, in interweaving the fourfold with man’s being-in-the-world.

Etymology of Window

Bearing in mind abovementioned points, in order to shed light on the essence of emptiness within the surface of shelter, Window, the etymology of the term ‘Window’ will be outlined. According to Klein (1966) and Liberman (2008), the term ‘window’ has three different roots.

- The oldest origin of ‘window’ is the ‘old english’ term ‘Eagbyrl’, which means ‘Eye-Hole’. This term implied to the small hole on the roof of huts to take sunlight inside the shelter. The ‘Eye-Hole’ was literally a hole within the bounds of the dark shelter to bring light to eye; to make man able to see.
- Another origin of ‘window’ is the ‘Old Norse’ term ‘Vindauga’, ‘Vindr + Auga’, which means ‘Wind-Eye’. Here ‘Eye’ implies to ‘opening’. The ‘Wind-Eye’ refers to the opening which lets the wind in; a hatch to the flow of air within the shelter.
- Another origin of ‘window’ is the ‘old english’ term ‘EagDuru’, which means ‘Eye-Door’. Here underlies the twofold essence of door; open and close; two possibilities of connection or detachment. Simply put, ‘Eye-Door’ is the possibility of connection to the outside world; the possibility to link outside to the immediacy of experience.

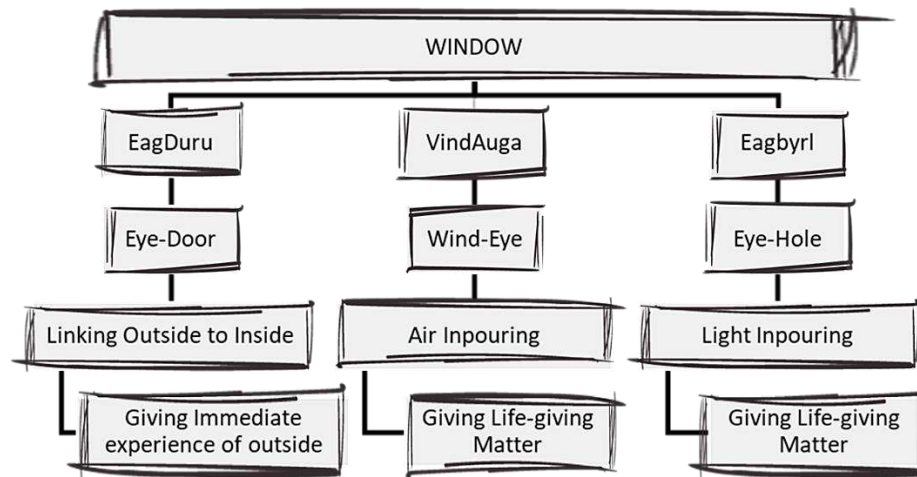
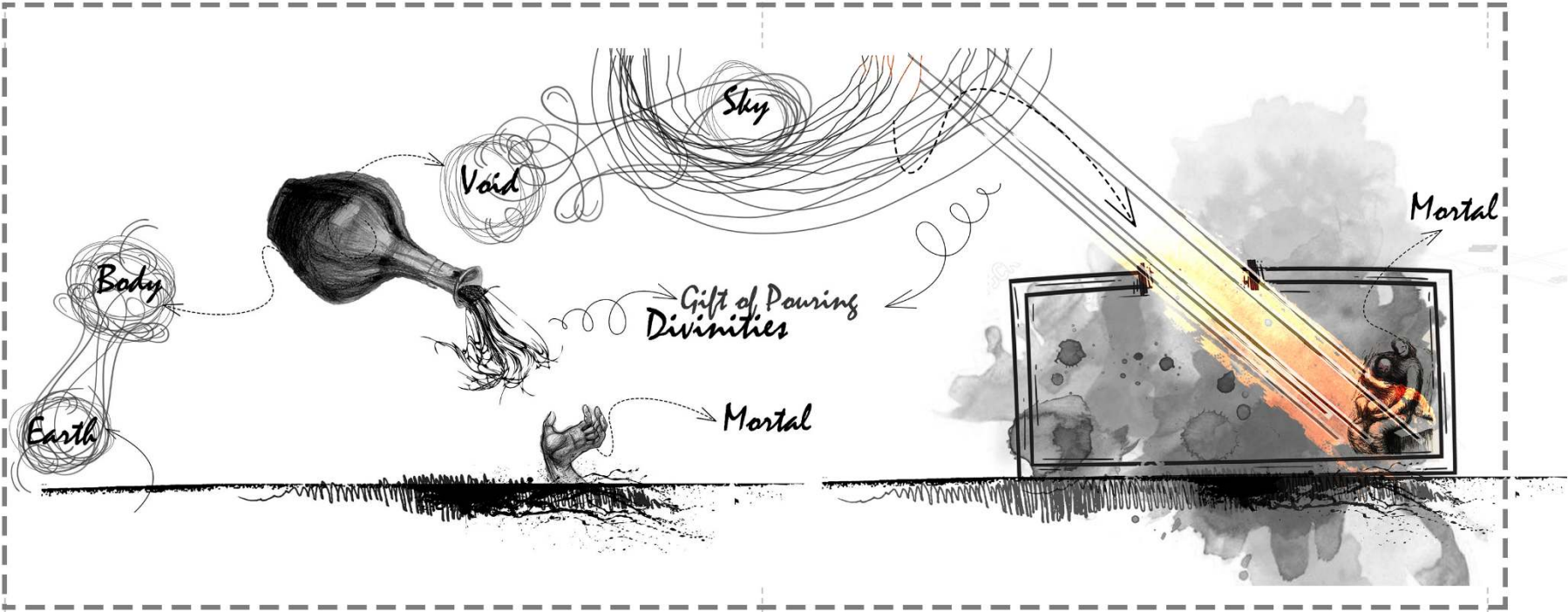


Figure 73. Origins of the Term 'Window' (by author)

Section Summary

To sum up, following (Figure 74) is the illustration of the Conceptual links between the ‘hypothetical Jug’ and the ‘Primitive Hut’.

			HYPOTHETICAL JUG	HYPOTHETICAL PRIMITIVE HUT
Man's rootedness: To be enframed within the peras of fourfold	FOURFOLD	EARTH	Jug's body	primitive hut's body (walls,roof,floor)
		SKY	Emptiness (void)	Emptiness (void)
		DIVINITIES	Gift of pouring	Gift of pouring
		MORTALS	Lifegiving (Drinking)	Lifegiving (light and air)



		HYPOTHETICAL JUG			HYPOTHETICAL PRIMITIVE HUT				
NOTHINGNESS	ON SURFACE	Jug's Hatch			Openings on Hut (Window)				Causes the flux of life- giving matter
		ESSENCE (GIFT GIVING)	Outpouring	Inpouring	ESSENCE (GIFT GIVING)	Outpouring	Inpouring		
			Giving life-giving matter Giving drop of life enhancing water to man	Holding In order to hold and save water		Giving immediate experience of the other side by dint of letting life-giving matters (air-light) to be received by outsiders	Giving immediate experience of the other side By dint of letting sensory information to be received by the inside dweller	Giving Life- giving matter by dint of letting life-giving matters (air- light) to be received by inside dweller	
	WITHIN VOLUME	The Void inside the Jug			The Space inside the Hut				Causes to Hold the life- giving matter
		ESSENCE (GIFT GIVING)	Containing: holding fluid inside		ESSENCE (GIFT GIVING)	Sheltering: Containing man inside refuge for man from the fickleness of nature			

Figure 74. Conceptual Links Between 'Hypothetical Jug' And 'Dwelling And Its Window' (by author)

5.1.2 Extracting ‘Conceptual Layers’ of ‘Window’ as ‘Hypothetical Bridge’

This section seeks the mutual ‘Conceptual Layers’ between Heideggerian Hypothetical Bridge and ‘the window of the primitive hut’ as ‘the built-thing within a built-thing’, which affords the mortal man a connection to the outside world without disrupting the essence of shelter.

Window; A Bridge within The Primitive Hut Connecting Inside To Outside

The bridge in Heideggerian conception, is a ‘built-thing’ which ‘brings forth’ a connection; the connection which affords the mortal man a way to pass the stream without locking up the forces of nature. Heidegger’s choice of a bridge alludes to the point that the term ‘built-thing’ comprises any outcome of the interlocked activity of building-dwelling; not merely the archetypal residential buildings.

Besides, as justified within the previous section, the opening of the ‘primitive hut’ is actually connecting the inside to the outside world. In this sense, the window, as a built-thing within the primitive hut (as a built-thing), which affords the mortal man a ‘connection’ to the outside world without disrupting the essence of shelter. Accordingly, the essence of this ‘connection’ has been considered within the interpretations on the links between ‘hypothetical jug’ and ‘hypothetical primitive hut’ under the term of the ‘poured gift’ (Figure 74). As mentioned before, the essence of ‘poured gift’ in ‘hypothetical primitive hut’ can be categorized as below:

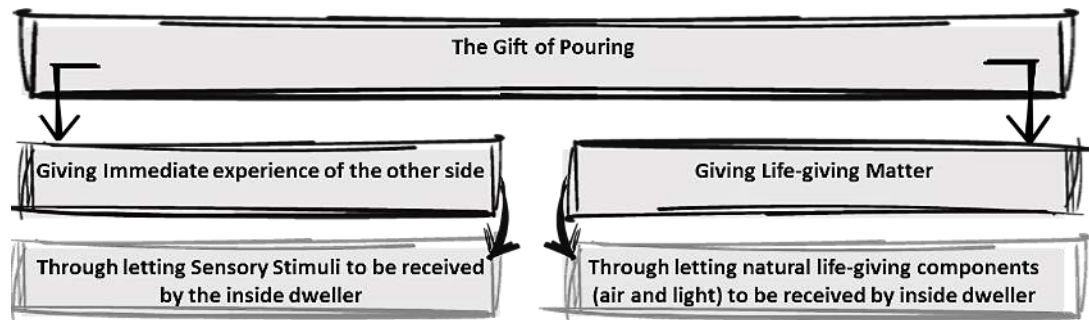


Figure 75. The Essence of 'Poured Gift' In 'Hypothetical Primitive Hut' (by author)

According to the abovementioned, following is the justification of links between 'Hypothetical Bridge' and 'the window of the primitive hut' through the aforementioned 'Conceptual Layers' of hypothetical bridge:

Window Swings over Wall

As considered before, the bridge swings over the river without blocking the flow of stream. The significance of the bridge is in not locking the forces of nature (the flow of stream) but at the same time granting the mortal man a way to pass the river. In this regard, the bridge (built-thing) is brought forth as a Poiesis; the Poiesis which lets the stream to run its natural path and simultaneously affords man a way to the other side.

Regarding window in primitive hut within this perspective, the opening of the primitive hut is affording the dweller a way to connect to the outside; to take the gift of pouring. But at the same time the opening of primitive hut is not disrupting the essence of shelter. In fact, to be more precise, the walls of the shelter play the main role to give refuge to man from the fickleness of nature as the boundary between inside and outside world. Accordingly, the significance of the opening of the primitive hut is in not disrupting the role of the bounds of shelter. Manifestly, what is causing window to bring about 'Poiesis', is the concept of 'Peras'; in other words, window is bounded

in order not to interrupt the essence of shelter. In the long run, window swings over wall.



Figure 76. Window Swings over the Boundary of Primitive Hut (by author)

Window Brings Together Inside and Outside

Previously it has been mentioned that the bridge intertwines dwelling with the fourfold constituents of the world through ‘Poiesis’. The bridge is a continuity of the concrete earth crossing over the gap within earth. In other words, the bridge joins two solids by a solid within a void. Considering window in primitive hut within this standpoint, the opening of the primitive hut is a continuity of the Void of Sky crossing over the Solidity of walls of Primitive Hut. In other words, the Window joins two Voids (inside and outside) by a Void (Opening) within a Solid (wall).

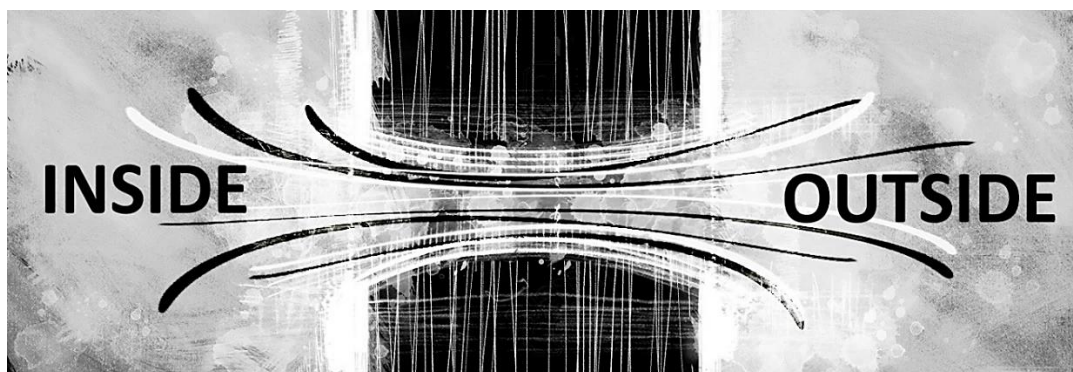


Figure 77. Window Brings Together Inside and Outside (by author)

In this sense, through the ‘bringing forth’, the window interlocks the solidity of earth with the emptiness of sky in order to afford mortal man a perceptual link to provide life-giving natural components. Remarkably, the attitude of the Window in affording the perceptual way to man is in the way that hints man his lack of control over natural forces beyond (the presence of divinities). Mortal man inside the dwelling watches the fickleness of outside weather while taken in hug by hut, awaiting the peace of nature. Accordingly, this connection (which is brought about through interweaving with fourfold) immediately impacts man’s daily life experience; in other words, window’s bridging realigns the role of the wall in the daily immediate experience of dwellers.

To illustrate, specific sensory stimuli patterns which are generated inside the space by the presence of window, brings about various daily activity patterns for dwellers. They may observe the daily happenings in the outside world through the frame of window. Two individuals may fall in love through the rear windows.

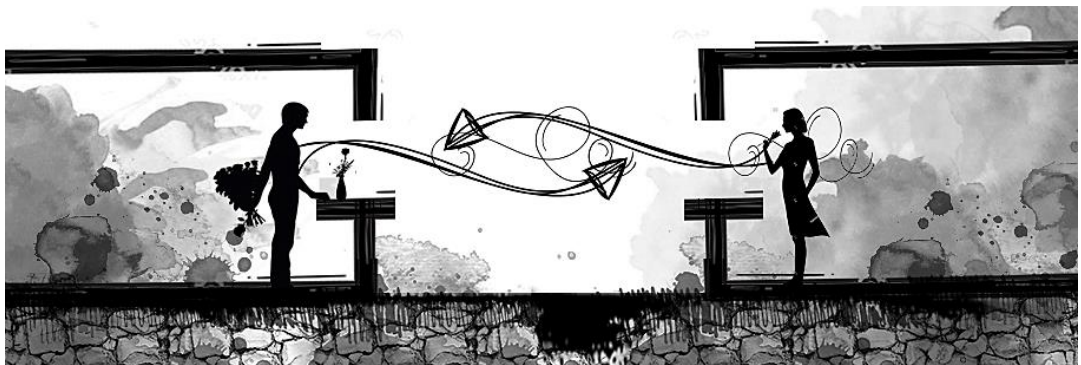


Figure 78. Window Brings Together inside and Outside (by author)

The sunlight near the window creates a luminous and warm atmosphere which makes it the favorite place for the individual who wants to read his book. The smell of the orange trees nearby the house yard makes the wind coming inside through the window, distinguished and memorable.

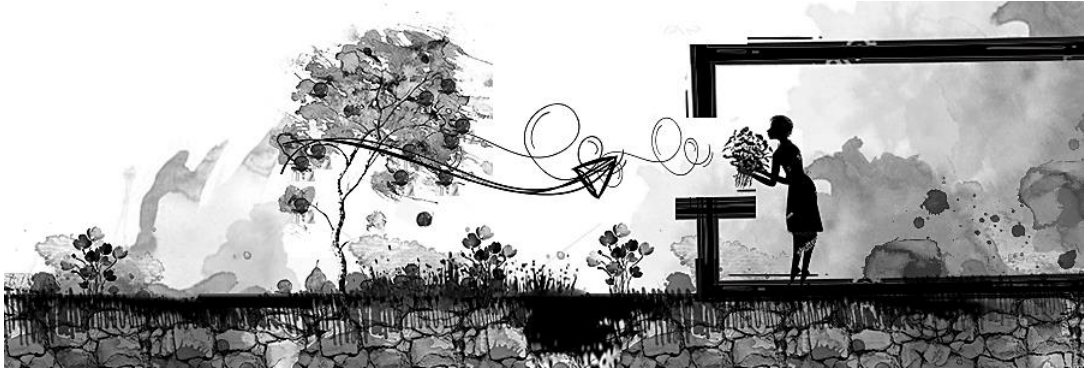


Figure 79. Window Brings Together Inside and Outside (by author)

Moreover, through a far wider viewpoint, the presence of window grants dwellers the perception of time passage. Individuals experience the passage of time in sequence of day and night or within different seasons and orientate their being through space-time continuum by dint of window.

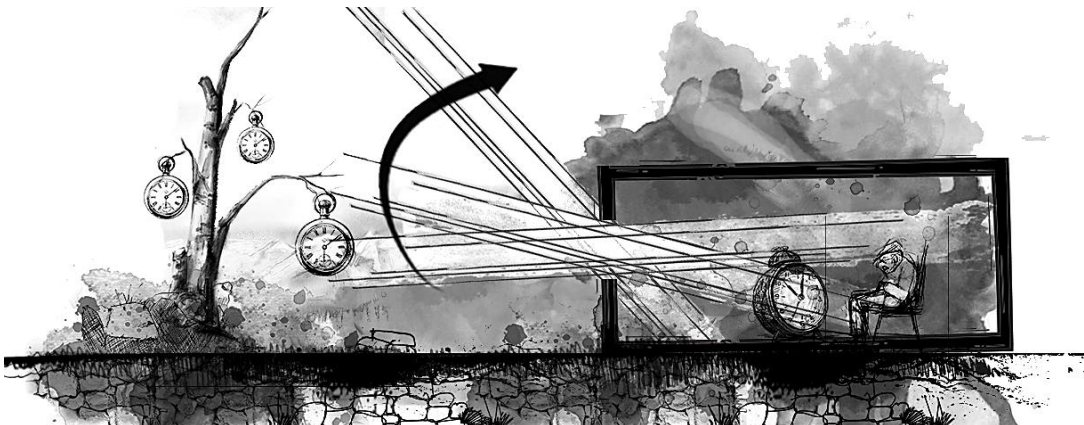


Figure 80. Window Grants Dwellers the Perception of Time Passage (by author)

The Place of the Window

The emergence of the Window affects the way dwellers conceive their situation in relation to the place of the Window within the walls. Before the emergence of the Window, all the spots along the wall are almost the same for the dwellers. But only when the window emerges in one of the possibilities, that spot will be the place of the

window from that moment. In this way, dwellers may gather various memories due to their daily use of the window.



Figure 81. The Place of Window (by author)

Window Situates Man's Immediate Experience in Connection with both sides of the Wall

The window actually links nearby dweller's immediate experience with the other side of the wall. Consequently, the presence of the window situates man's immediate experience in connection with both sides of the wall, inside and the outside.

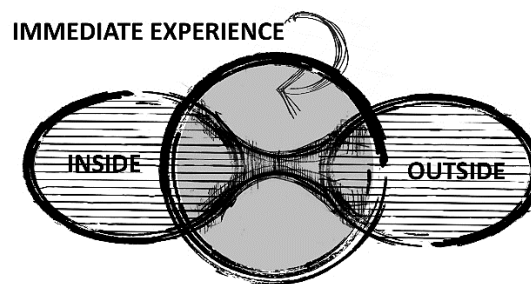


Figure 82. Window Situates Man's Immediate Experience in Connection With inside and Outside (by author)

Window Frame 'Holds up' the One Who Crosses It

Window initiates a mutual ocular experience between the user and the world outside.

Window allows the one who crosses the Window Frame to see the Outside world and

simultaneously exhibits the one who crosses it. In this vein, the window does not show the ‘world around’ completely until the user get close to the Window frame and present himself to the outside world.

Window Determines Man’s Understanding of the Other Side of the Wall In Relation To It

With regard to what mentioned above, the Window situates man’s immediate experience in connection with both sides of the Hut Boundary only if the user allows Window to present him to both sides. Notably, the extent of this ocular connection depends on the situation of the user relative to the Window. As the user moves and gets close to the window frame, the connection of his immediate experience to both sides increases to the maximum. This phenomenon occurs in both sides, inside and outside; from both the viewpoint of the outside passer-by looking at the window of a house and from POV of the inside dweller looking outside through the window of his house.

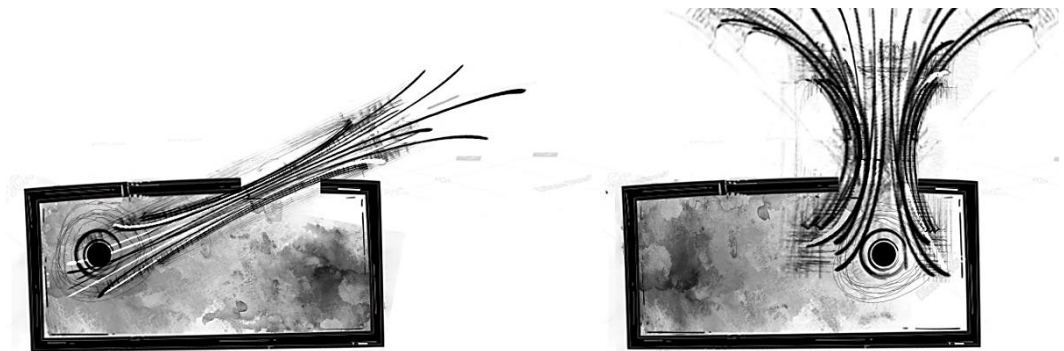


Figure 83. Window Determines Man’s Understanding of the Other Side of the Wall In Relation To It (by author)

Section Summary

To sum up, following is the illustration of the Conceptual links between the ‘hypothetical Bridge’ and the ‘Window’ in Primitive Hut.

Table 1. Conceptual Links Between the ‘Hypothetical Bridge’ and The ‘Window’ In Dwelling; Swinging over Wall (by author)

	Bridge	Window	Significance of the Built-Thing
swinging over wall	bridge swings over the river without blocking the flow of stream 	Window affords dweller a way to connect to the outside; to take the gift of pouring, without disrupting the essence of shelter. 	Bringing Forth Poiesis by dint of ‘Peras’

Table 2. Conceptual links between the ‘hypothetical Bridge’ and the ‘Window’ in Dwelling; Bringing together inside and outside (by author)

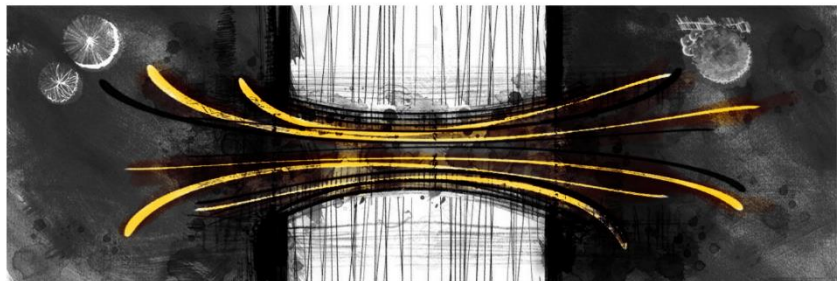
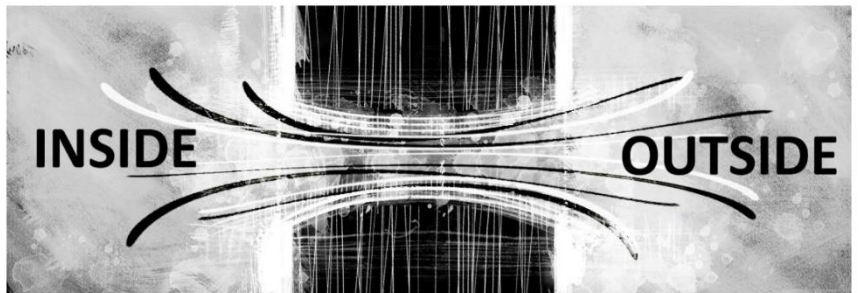
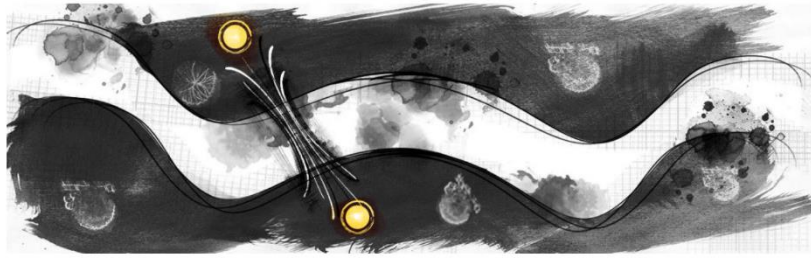
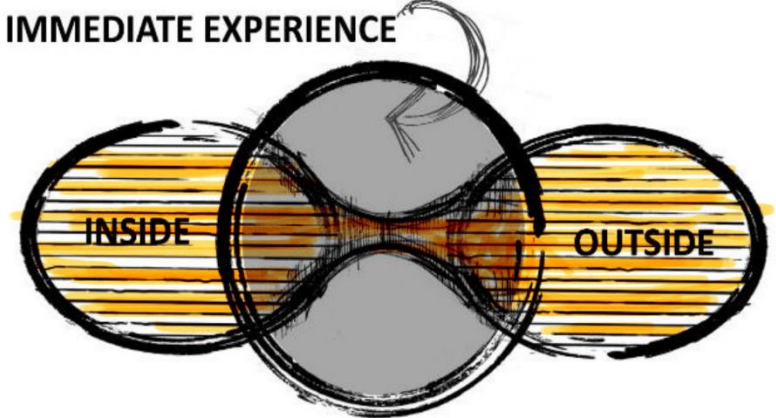
	Bridge	Window	Significance of the Built-Thing
bringing together inside and outside	bridge is a continuity of the concrete earth crossing over the gap within earth	the Window is a continuity of the Void of Sky crossing over the Solidity of walls of Primitive Hut	Gathering the Fourfold by Interlocking the solidity of earth with the emptiness of sky in order to afford mortal man a perceptual link to provide life-giving natural components.
	joins two solids by a solid within a void 	Window joins two Voids (inside and outside) by a Void (Opening) within a Solid (wall). 	
the place of window	With the emergence of the bridge in one of the possibilities, that spot will be the place of the bridge from that moment 	only when the window emerges in one of the possibilities, that spot will be the place of the window from that moment. 	Brings about the Concretization of space by affecting the way dwellers conceive their situation in relation to the place of the Window within the walls

Table 3. Conceptual Links Between The 'Hypothetical Bridge' And The 'Window' In Dwelling; Situating Man's Immediate Experience In Connection With Both Sides Of The Boundary (by author)

	Bridge	Window	Significance of the Built-Thing
situating man's immediate experience in connection with both sides of the boundary	links nearby dweller's immediate experience with the other side of the river through initiating a mutual ocular experience between the user and the world outside 	links nearby dweller's immediate experience with the other side of the wall through transferring sensory stimuli between two sides of the wall IMMEDIATE EXPERIENCE 	situating man's immediate experience in connection with both sides of the wall, inside and the outside.
Determining man's understanding of the other side in relation to it	bridge situates man's immediate experience in connection with both sides of the river only if the user allows bridge to present him to both sides 	window situates man's immediate experience in connection with both sides of the wall only if the user allows window to present him to the other side of wall 	Situating dweller's immediate experience in connection with both sides of the wall only if the user allows window to present him to the other side of wall
'holding up' the one who crosses it	bridge frames and exhibits the one who crosses it 	window frames and exhibits the one who crosses it 	Embodying meditative thinking through making dweller to wait for the moment of disclosure

5.1.3 Nexus between Jug and Bridge

Considering the abovementioned discussions on the essence of hypothetical jug and bridge and the underlying links to the primitive hut and its window, manifestly the nexus between the jug and the bridge essentially is in the act of ‘connecting’; The connection which is afforded between inside and outside through interplay of void (nothingness) and solid (Beingness). Accordingly, this nexus can be illustrated as following:

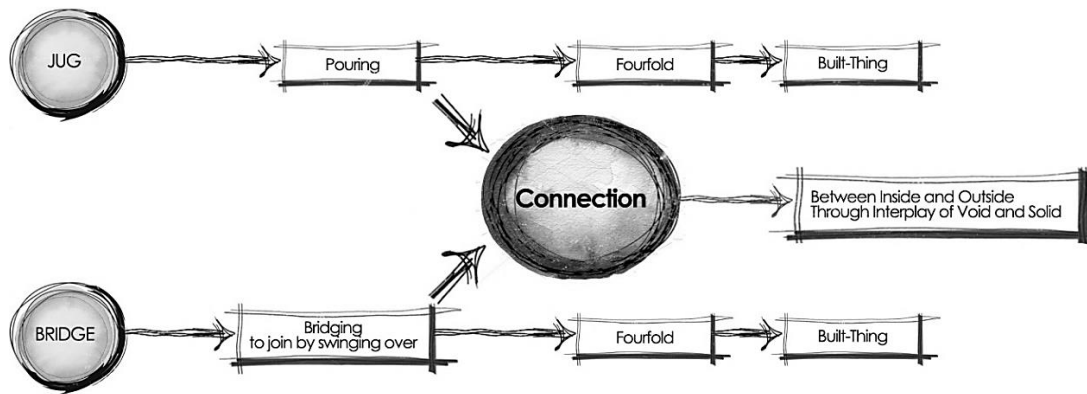


Figure 84. Nexus between Jug and Bridge (by author)

5.2 The Role of ‘Window’ in Ontological Values of Dwelling

Within the third chapter the significance of primitive hut and its two core respective values have been considered. Firstly, the genesis of primitive hut as Heideggerian built-thing was studied; the ‘built-thing’ which is the ontological response to the interaction between men’s twofold contradictory needs in relation to nature. In view of that, two main values of primitive hut has been studied. ‘Hard core of beauty’ sheds light on the core essence of the beauty in ordinary natural built-things. Hard core of beauty in primitive hut makes man rooted to his own being-in-the-world as the ‘non-I’ which protects the ‘I’. The ‘protected intimacy’ in primitive hut Describes the way in which the immediacy of physical experience is augmented by twofold of

imagination and memory only if the hut provides corners and deep shadows for dweller to curl up and bear reveries. In view of that, this section traces the role of window in primitive hut's abovementioned values of 'protected intimacy' and 'hard core of beauty'. According to the discussions in the third chapter the traces of the role of window in ontological values of dwelling can be considered within two perspectives:

5.2.1 Window as 'Poiesis' Through Confronting Nature

As considered in the previous section 'window as bridge', the significance of window in primitive hut, as Heideggerian 'built-thing' within another built-thing, is in the ontological response to dweller's twofold contradictory needs in relation to nature; Man needs to take refuge from the fickleness of nature while simultaneously needs the life-giving donations of nature. In this sense, window brings forth a peaceful response to men's need.

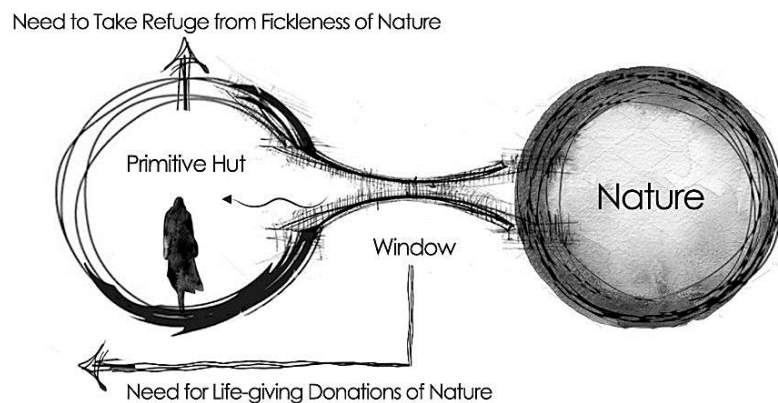


Figure 85. Window's Inpouring Ontological Response to Dweller's Twofold Contradictory Needs In Relation To Nature (by author)

However according to Bachelard's notion of 'protected intimacy', window within primitive hut brings forth another response to dweller's another twofold of contradictory needs. With regard to the interpretations within the third chapter,

fickleness of nature forces man to refuge to the shelter of primitive hut, the warm corner of the world to curl up into the protected intimacy; the non-I which protects I. The corner which shelters man's reveries of comfort and security, who faced with the fickleness of nature. But the crux of matter is that, reveries need to be aware of the storm outside the shelter. Man deep in his unconscious reveries needs to remember the significance of shelter. To feel the depth of protected intimacy more intensively. To orientate his being, in accordance with the non-I that protects I. to rest tranquil in the cradle of house after being-thrown in earth. In this way, the primitive hut becomes near to one's presence so that he can feel his own being, his loneliness. With regard to the abovementioned, window is affording the inside dweller a way to be aware of the storm outside the shelter and remember the significance of the primitive hut. Accordingly, the following figure demonstrates the discussion.

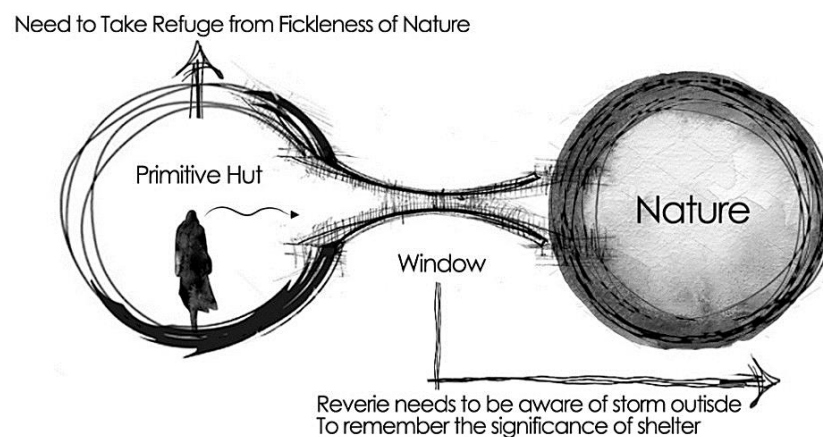


Figure 86. Window's Outpouring Ontological Response to Dweller's Twofold Contradictory Needs In Relation To Nature (by author)

5.2.2 Dialectics between Window and Dark Corners

In one hand, with regard to the discussions in third chapter, it is understood that dreamer tries to gather his presence through moments identified with enclosed, simple and bounded spaces in home, the spaces which are not in hunger for expansion but yet

waiting to be dis-covered, like the dimmed corners in a primitive hut. The places which sensation of home and tactile pleasure are interwoven. The dimmed corners and shadows play a very important role in augmentation of home experience with reveries. Shadows and intense darkness are vital for man's reveries. Shadow and diminishment of sense of vision are vital to stimulate reveries. But on the other hand, window as mentioned previously, brings forth man's need for natural components of sunlight and fresh air. In other words window causes the inpouring of natural components inside the primitive hut. Manifestly, there lays a dialectical opposition between the augmentations of home experience with reveries and dweller's need for natural components. Obviously increasing the extent of light inpouring through the window will interrupt the dim corners and deep shadows and accordingly the dweller will loss the reveries in space. Conversely, wholly closing off the window will drown the space in absolute darkness and accordingly the space cannot afford dwelling for man. In this sense, many contemporary upshots of architecture inclined to the maximum inpouring of light due to the prevailing technological calculative mind. The so-called advantage of maximum light efficiency caused diminishment of reveries and the consequent intimacy in houses.

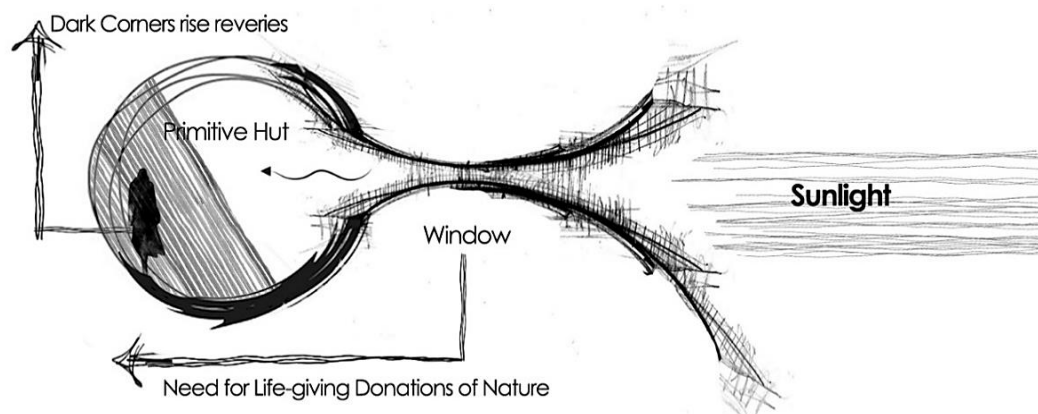
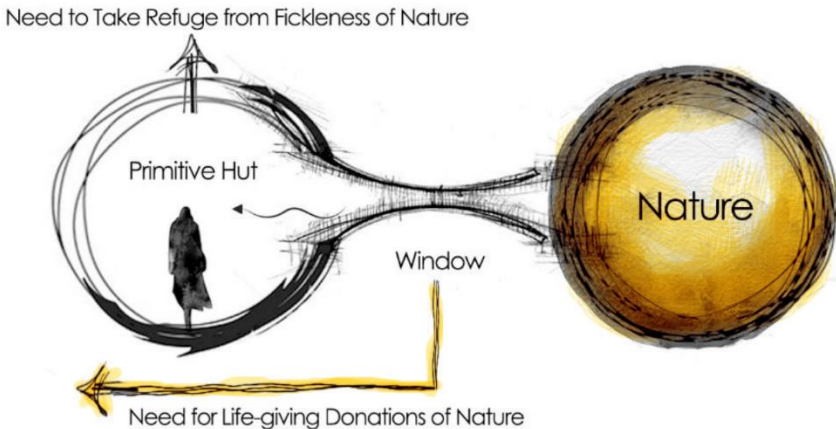
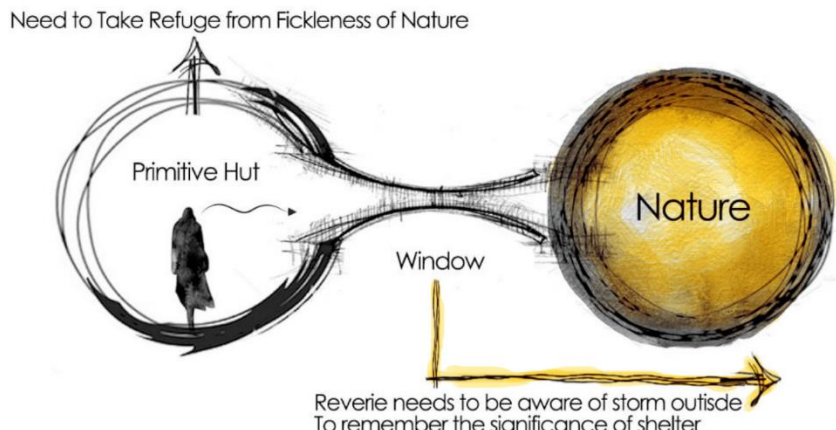
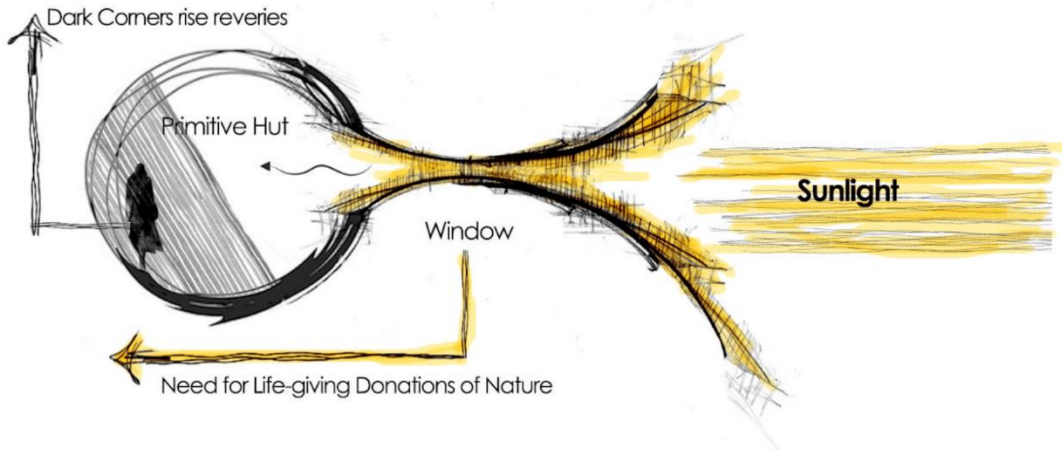


Figure 87. Dialectics between Window and Dark Corners (by author)

5.2.3 Section Summary

To sum up, following is the illustration of the ‘Conceptual Layers’ beneath the role of ‘window’ in Ontological values of dwelling.

Table 4. ‘Conceptual Layers’ Beneath the Role of ‘Window’ In Ontological Values of Dwelling (by author)

Window as 'Poiesis' through confronting nature	Window's inpouring ontological response to dweller's twofold contradictory needs in relation to nature		Man needs to take refuge from the fickleness of nature while simultaneously needs the life-giving donations of nature. In this sense, window brings forth a peaceful response to men's need.
	Window's outpouring ontological response to dweller's twofold contradictory needs in relation to nature		Window is affording the inside dweller a way to be aware of the storm outside the shelter and remember the significance of the primitive hut in order to feed his reveries.
	Dialectics between window and dark corners	Dialectics between Window and Dark Corners	

5.3 Exploring the ‘Conceptual Layers’ of Window Trough Sample Study

In the long run, this chapter of the study tends to shed light on the presence of ‘Conceptual Layers’ of window derived from the literature, in the practicality of architecture through examining two existing Samples:

- Experimentally Built Hut by Ann Cline;
- Farnsworth House by Mies van der Rohe.

5.3.1 Justifying the Criteria for Selecting Samples

The Samples are designated attentively due to the twofold dialectical mindsets of technological mind and meditative thinking specifically toward the creation of window within the Samples. The first Sample is the ‘experientially built’ primitive hut by Ann Cline which was based on practicalizing Heideggerian theoretical frameworks on notions of ‘dwelling’ and ‘built-thing’ within the standpoint of meditative thinking (Cline, 1997). The second Sample is Mies van der Rohe’s well-known ‘Farnsworth house’ which has been repeatedly described as an upshot in domination of glass window in modern architecture and the consequence of technological mind (Petty, 2010, Tutter, 2011). Accordingly, presence of the discussed ‘Conceptual Layers’ of window (Figure 107) can be scrupulously examined in two Samples, each as the embodiment of one of the dialectical theoretical standpoints. The exaggeratedly divergent samples have been designated intentionally, in order make possible the tracing of the divergence of the conceptual layers in two samples.

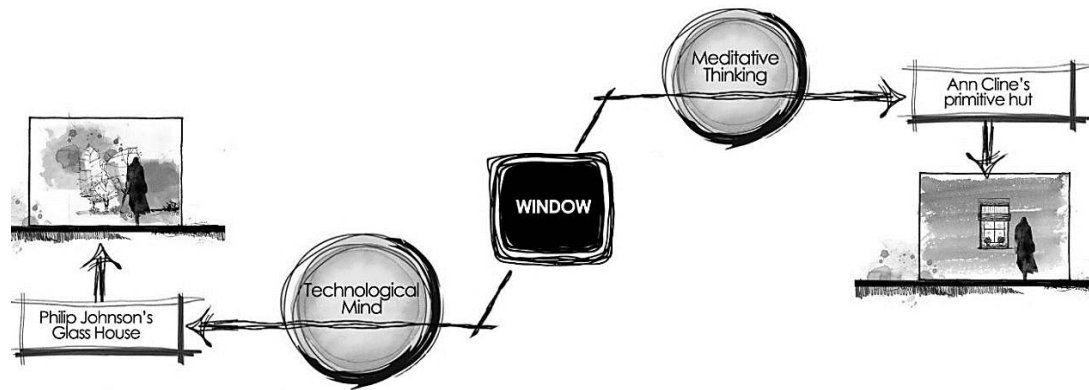


Figure 88. Criteria for Selecting Samples (by author)

Moreover, the other notable criteria for selecting Samples is the similarity in spatial organization. the core notion in formation of the Samples is contradictory; notwithstanding, both the Samples are simply one single space encompassing the daily life of dweller; which increases the feasibility of examining specific ‘Conceptual Layers’ of windows in both Samples.

5.3.2 Review on Designated Samples

Firstly, the two Samples have been introduced briefly in terms of concept of creation, specifications and the spatial experience of living in them.

Ann Cline's Primitive Hut



Figure 89. Ann Cline's Primitive Hut (Cline, 1997).

Ann Cline's primitive hut is in fact the praxis of a long-term first-person experiential research on the essence of dwelling in practicality of daily life. The project of primitive hut initiated in her mind while she started to scrutinize the Japanese Tea ceremony and owing to that, she got involved with immediacy of build-dwell through contribution of archaic senses; haptic involvement in build action in response to daily life real-time experienced needs. Then Cline deeply submerged in Heideggerian concepts of dwelling and the way in which a built-thing is 'only' a built-thing nothing more. In line with this, she was also under the influence of Zumthor's notion of 'hard core of beauty'; the concrete core of beauty in a thing which is laid underneath the raw, ordinary natural way in which the thing is grown and brought forth not for demonstrating any superfluous aesthetic message but only for the sake of its immediate

use through human daily life. Within this theoretical background she initiated her long-term first-person experiential project of building her own primitive hut. Ann Cline has narrated her phenomenological experience of this journey in her book 'A Hut of One's Own'.

Concept of creation

As mentioned above, Cline was fascinated with Japanese tea ceremony. She describes in her book that by accident she reads the book 'The Book of Tea' by Kakuzi Okakura which was a phenomenological narrative of a Tea Hut. She quotes the following description from Okakura's book as the definition and notion of the hut which she planned to build:

“An ephemeral structure built to house a poetic impulse... devoid of ornamentation except what may be placed in it to satisfy some aesthetic need of the moment . . . purposely leaving some things unfinished for the play of the imagination to complete (Okakura, 1964)”.

Then she describes that this paragraph evokes the notion of a hut as refuge. She portrays the experience she had in childhood in her small tree house while the howling storm was clawing to come inside her intimate warm shelter. Cline's primitive hut project is factually the experience of the dialectical game between the 'I' and the 'non-I' that protects I from the fickleness of nature in the interweaving process of build-dwell. In other words, Cline phenomenologically experienced and narrated the primordial routine way of building and intensively dwelling the merest membrane by virtue of touching the factual nearness.



Figure 90. Ann Cline's Childhood Tree House (by author)

Specifications



Figure 91. The way to the entrance of Cline's primitive Hut (Cline, 1997)

Ann Cline' primitive hut is a single-space hut based on a 6 feet by 8 feet platform which 4 corner columns support a pitched roof. The hut contains 3 small windows of about 20 inches square. A small wooden plate under one skylight window made the

small area for backstage of tea and some daily tasks and a tiny modest porch roof at the entrance which is supported by a tree trunk.



Figure 92. Primitive Hut; West Section (by author)



Figure 93. Primitive Hut; South Section (by author)

Spatial Experience of Living

In order to take steps in the factual way of building and dwelling Cline moved to the heart of nature and initiated her project from scratch. She put herself shelterless in immediate encounter with nature to appreciate how the interplay of build-dwell are interwoven with the primordial needs of man who is facing with the fickleness of nature. Accordingly, she narrated her experience of building her hut from the first initial steps while there was actually nothing.

Initially, Cline made a simple 48 square feet platform and sat on it. She thought the area of the platform is enough for her to take refuge to. Cline describes herself at the moment sitting on that simple rectangle plane like the living creature which is defining a private territory around self while still remained unprotected from the outside nature even within the limits of the own area.



Figure 94. Initially, Cline Made a Simple 48 Square Feet Platform and Sat on It (by author)

Thereupon the first need emerged as soon as the first rain came and consequently the first response to it revealed as the act of building a pitched roof on 4 corner columns made of tree trunks. Then she delineates the experience of being inside this built-thing as being within a gazebo. However, she reports starting to feel ‘being inside’, still she felt unprotected and states that being in such gazebo is like exposing yourself to prying eyes. Therefore, Cline emphasizes that this built-thing is not a refuge yet.



Figure 95. The First Rain Came And Consequently The First Response To It Revealed As The Act Of Building A Pitched Roof On 4 Corner Columns (by author)

As the biting cold wind of autumn started to blow, the need for an enclosed refuge became immediate. Therefore, Cline started to build walls around her hut by nailing plates of woods to the frame structure. She describes the moment that she was gradually feeling protected as the hut became enclosed by walls, then she refers to her reveries about her childhood in that moment. She remembers the warm aura of haptic protection and intimacy that she experienced in her childhood. Then she left some crude openings among the wooden plates as windows to let the light and air in.

Then she entered a long-time daily process of trial and error. She ran the cycle of build-dwell until the moment that the built-thing feel 'firm'. By the term 'firmness' Cline means to feel that the built-thing is in its factual embodiment and relation with the world; in other words, to be grounded or to be at rest. In Heideggerian terms to be at one with the world. For Cline one of the significant factors in impression of firmness in built-things is the factual scale of a thing specifically in the Sample of windows. She changed the orientation and dimension of the windows in her hut for times and times to find the way in which the window becomes finally at rest. For Cline, building the window of her hut was like adding the last piece of puzzle.



Figure 96. The Widow Cline Allocates For His Essential Routine Objects (Cline, 1997)

As Cline narrates in her book, the genesis of windows in her hut was essentially intertwined with her daily routines and the respective needs of light and air. Ann Cline had brought some Essential objects with herself, an old kettle, bowl and some books which she was engaged with them most of her day. Accordingly she allocated one window for the space which was defined by those objects. In this sense, she emphasizes that intentionally avoided of making a large window. One of the main reasons can be found in the book which Cline was highly influenced by, 'The Book of Tea'. Okakura describes the enigmatic scene in the tea ceremony; the way that the gentle hot steam coming out of the lid of an old iron kettle which is half way concealed in the deep darkness of the room and the way the bright small window partially reveals the frolic steam calling the one who is awaiting the tea. Drinking the tea floating in the

bowl is as if swallowing the shadows melting on tongue (Okakura, 1964). Furthermore, the small window enframed a particular view of the outside world for Cline; the view of an old sculpturesque tree which Cline enjoyed watching it while drowning in dreams. In this sense, Cline preferred the small square window.



Figure 97. The Skylight Window Shaping the Routine of Tea Backstage (Cline, 1997)

After some time and running cycles of build dwell for days and nights, Cline found out that she needs a window for the space which she specified for her routine of tea backstage; where she needed more bright rays of sun light rather than view. She describes that she didn't need to see outside while preparing the prerequisites of tea,

therefore she decided to use a skylight in order to merely inpour the sunlight on the minimal wooden desk she was involving with.

Mies Van Der Rohe's Farnsworth House



Figure 98. Mies Van Der Rohe's Farnsworth House; Interior View (Clemence, 2006)

The Farnsworth House, Mies van der Rohe's well-known project, designed and constructed in 1951. Mies van der Rohe designed this minimal single-space building for Dr. Edith Farnsworth as a weekend retreat within a rural context. The Farnsworth house has been repeatedly titled as an iconic upshot of central tenet in international style because of the extremist utilization of floor-to-ceiling glass windows. The transparency of glass windows manifestly dominates the embodiment of this architecture to the extent that the building is actually an open space sandwiched between two discretely expressed horizontal slabs. In view of that, the interior space tremendously extends to the outside nature.

Concept of Creation



Figure 99. Mies Van Der Rohe's Farnsworth House; View From Outside (Clemence, 2006)

The key notion in designing the Farnsworth House for Mies van der Rohe, is the unification of man and nature in the act of dwelling (Goldberger, et al, 2010). For Mies, the architecture plays the key role in mediation between man and nature. Accordingly, he is on the idea that by minimizing of the concretization of the architecture the nexus between dweller and the exterior nature will be revitalized (Hilberseimer, 1956). Accordingly he believes that the non-essentials should be ignored and the only factual essentials are roof and floor. Which should be delicately devised by dint of proportion and nature. Therefore, in Farnsworth House the interior space extensively extends to the surrounding nature. In Mies's standpoint, this was the way modern architecture can interweave with the surrounding nature.

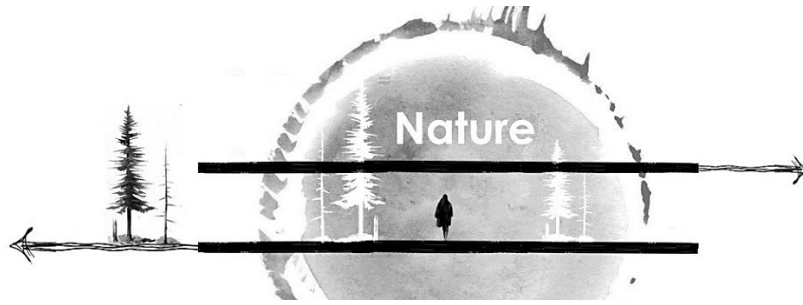


Figure 100. Farnsworth House; An Open Space Sandwiched between Two Horizontal Slabs Intertwined with Surrounding Nature (by author)

Specifications



Figure 101. Farnsworth House; A Minimalistic Single-Space Box In Which The Interior Space Is Surrounded Merely By Large Floor-To-Ceiling Glass Window Walls. (Clemence, 2006)

The Farnsworth house is a minimalistic single-space box in which the interior space is surrounded merely by massive thick single-pane, floor-to-ceiling plate glass panels. The only solidity within the envelopment is the horizontal slabs playing the role of floor and roof which are the only essentials for Mies. The white painted exposed steel is apparent on the edges of the slabs. 8 wide flange steel columns has been orderly arranged to ensure the structural stability and keep the roof slab on the top.

Owing to the fact that the project is based on a flood plain meadow, the box is elevated 1.6 meters from the ground. Another horizontal slab a bit lower than the main floor plays the role of a terrace. The only solidity within the room is a wooden block which Mies calls it 'the core'. It encompasses cabinet, kitchen, toilet and a fireplace.



Figure 102. Farnsworth House; Interior View (Clemence, 2006)



Figure 103. Intensive Transparency in Farnsworth House (Clemence, 2006)

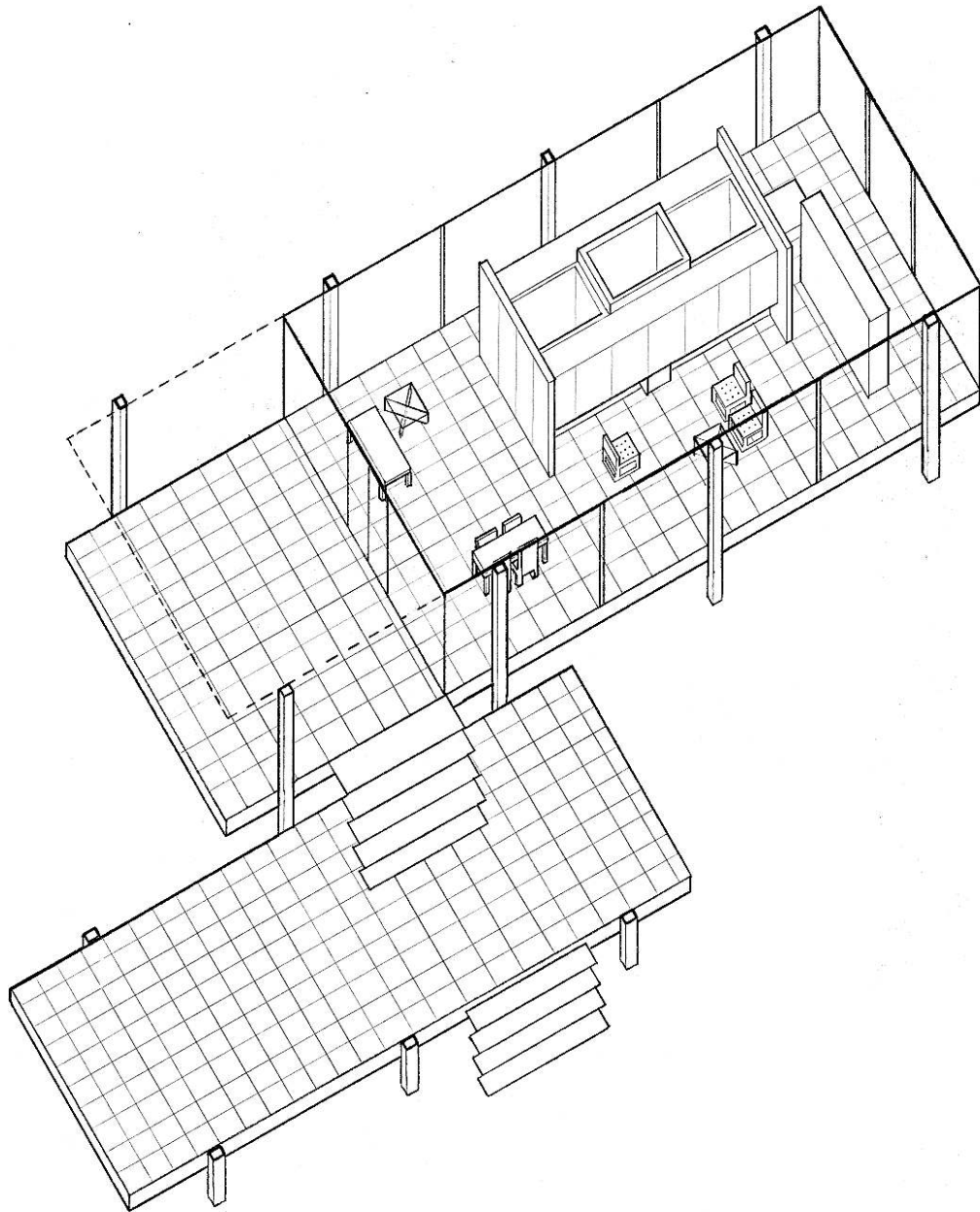


Figure 104. Farnsworth House; Spatial organization (Clemence, 2006)

Spatial Experience of Living

With regard to the abovementioned, the core concept of the Farnsworth house is the reinforcement of the nexus between nature and the human being through the mediation of architecture. In order to understand the essence of this connection in the project, this review needs a deeper conception of the spatial experience brought about by Mies. Herzog & Meuron (2016), delineate the spatial experience of being in the Farnsworth house while clarifying Mies's latent intentions in his design. Owing to the extensive transparency of boundaries, the experience of being inside the box is not limited to perception of aura inside the space, rather it is encompassed by sensory stimuli from surrounding nature. Accordingly, the inhabitant within the house is in an intensive immediate experience with surrounding nature (Herzog & Meuron, 2016).



Figure 105. The Huge Black Maple Tree Providing Cooling Shadow for Inhabitants (Clemence, 2006)

In view of that there lies an unceasing interplay of nature and the daily life within the box. Goldberger, et al (2010), mention that Mies has carefully arranged the location of the house on the site in order to anchor it in the cool shadow of a huge black maple tree. In this regard, the tree plays an integral role in relation to the house.

In addition to this, Mies unexpectedly choose the flood plain close to the river side to build his project on, instead of picking the flood free areas of the natural site. He intentionally devised the orientation of the house to bring about the immediate experience of facing the fickleness of natural forces like flood. Mies calls this attitude in confronting nature, as 'safe danger' experience (Herzog & Meuron, 2016). In his viewpoint, owing to technology, man became able to orientate his residence in a way to observe the fickleness of nature whilst being entirely safe. However, the Farnsworth house has been flooded considerably twice till now.



Figure 106. The Farnsworth House Has Been Flooded Considerably Twice Till Now (Clemence, 2006)

5.3.3 Exploring the ‘Conceptual Layers’ in Designated Samples

According to the interpretations chapter (Figure 74, Table 1 Table 2 Table 3 Table 4), the following (Figure 107) is the list of ‘Conceptual Layers’ which has been explored in both Samples. In this step, each of the abovementioned ‘Conceptual Layers’ have been methodically explored in both Samples and the underlying reasons and causes of their presence or absence in the Sample has been discussed.

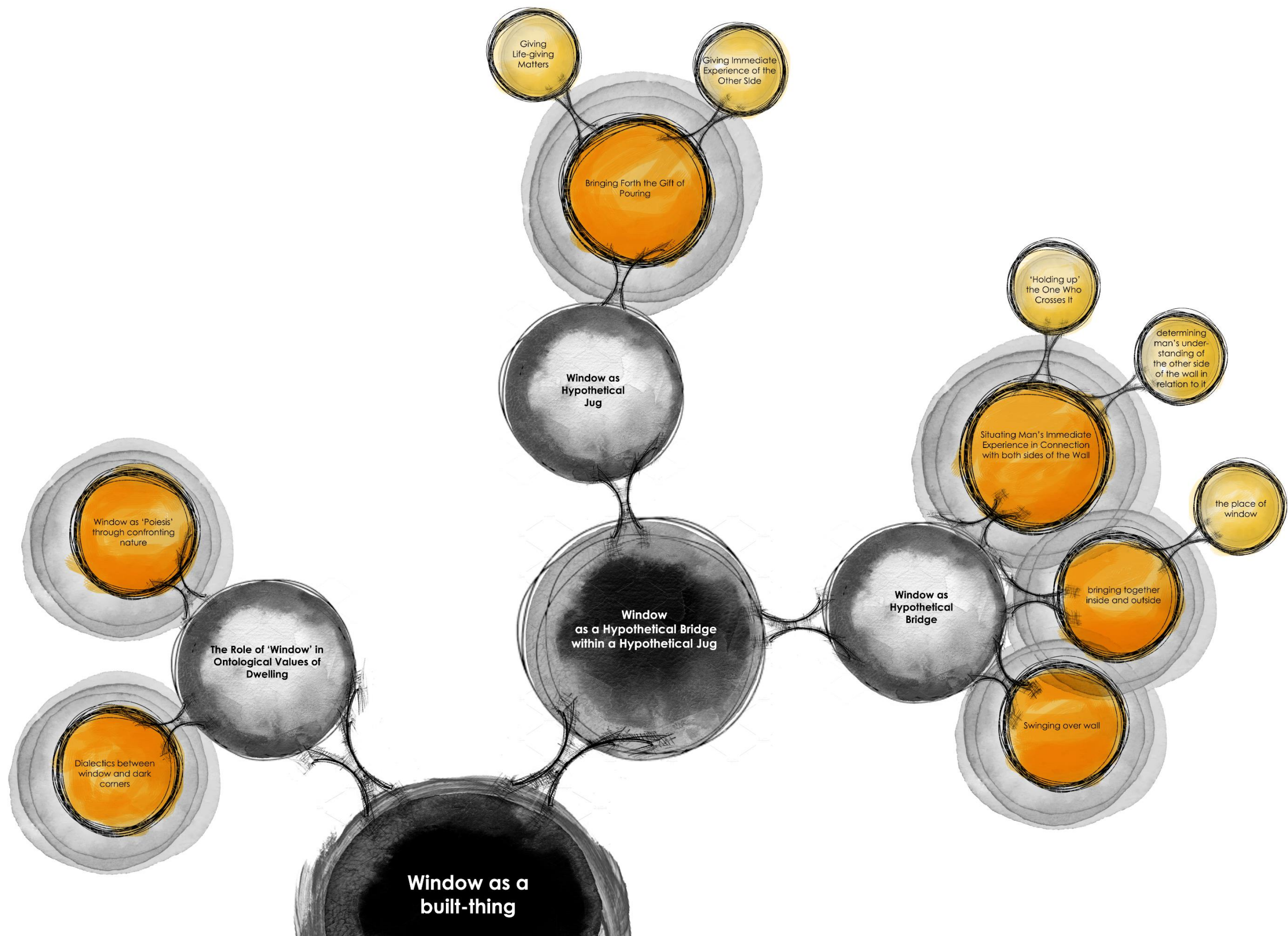


Figure 107. 'Conceptual Layers' Of Windows Which Has Been Explored in Samples (by author)

Window as a Bridge within a Jug

According to the interpretations and argumentations in 5.1.1 section, ‘Conceptual Layers’ of ‘Dwelling and its Window’ as ‘Hypothetical Jug’ has been extracted and illustrated in (Figure.74). In view of that, the presence of window in dwelling brings forth the gift of inpouring. The gift of pouring underlies two types of giving:

- Giving immediate experience of the other side by dint of letting sensory information to be perceived by the inside dweller;
- Giving life-giving matter by dint of letting life-giving matters (air and sunlight) to be received by inside dweller.

In consideration of the foregoing, in both of the samples window is bringing forth both types of pouring; however extremist utilization of floor-to-ceiling glass windows in ‘Farnsworth house’ causes the maximum inpouring in both ‘immediate experience of the other side’ and ‘life-giving matters’, compared with the limited pouring in Ann Cline’s ‘primitive hut’. On the other hand it is noteworthy to mention that in ‘Farnsworth house’ the extent of outpouring is also at peak. This causes the maximum exposure of dwellers private life within the house to the outside world as it was reported with displeasure by dwellers repeatedly (Herzog & Meuron, 2016).

Moreover, the window, as a built-thing within the dwelling (as a built-thing), affords the mortal man a ‘connection’ to the outside world without disrupting the essence of shelter. according to the interpretations and argumentations in 5.1.2 section, ‘Conceptual Layers’ of ‘Window’ as ‘Hypothetical Bridge’ has been extracted and illustrated in (Table 1, Table 2, Table 3). In view of that, the following ‘conceptual layers’ have been explored within two samples.

Swinging Over Wall

Regarding 'window' as 'Hypothetical Bridge' within dwelling, window affords dweller a way to connect to the outside; to take the gift of pouring, without disrupting the essence of shelter.

- Ann Cline's primitive hut

According to the discussions in 5.3.2.1 section, the small limited windows in primitive hut are made merely to inpour the essential needs of dweller to the necessary extent not more. To be more precise, the walls of the shelter play the main role to give refuge to dweller from the fickleness of nature as the boundary between inside and outside world. Accordingly, the significance of the window of the primitive hut is in not disrupting the role of the bounds of shelter. Manifestly, what is causing window to bring about 'Poiesis', is the concept of 'Peras'; in other words, window is bounded in order not to interrupt the essence of shelter.



Figure 108. The Window Of Primitive Hut Swings Over Wall Through Not Disrupting The Role Of The Bounds Of Shelter By Dint Of 'Peras' (by author)

- Mies van der Rohe's Farnsworth House

Regarding descriptions in 5.3.2.2 section, the interior space of Farnsworth house is surrounded merely by large floor-to-ceiling glass window walls. In fact, there is no opaque solid walls as boundary and the only concrete element confining inside space from outside, is the horizontal roof slab. In view of that, the expansive inpouring and outpouring occurs through all transparent surfaces around the box. The issue rises up here is that, in fact no opaque solid boundary is reigning in this box as crusted shell to realize the essence of sheltering. In other words, the extremist extension of windows in Farnsworth house, fails to bring forth 'Poiesis' and breaks the balance between 'affording dweller a way to connect to the outside', and simultaneously 'not disrupting the essence of shelter'.

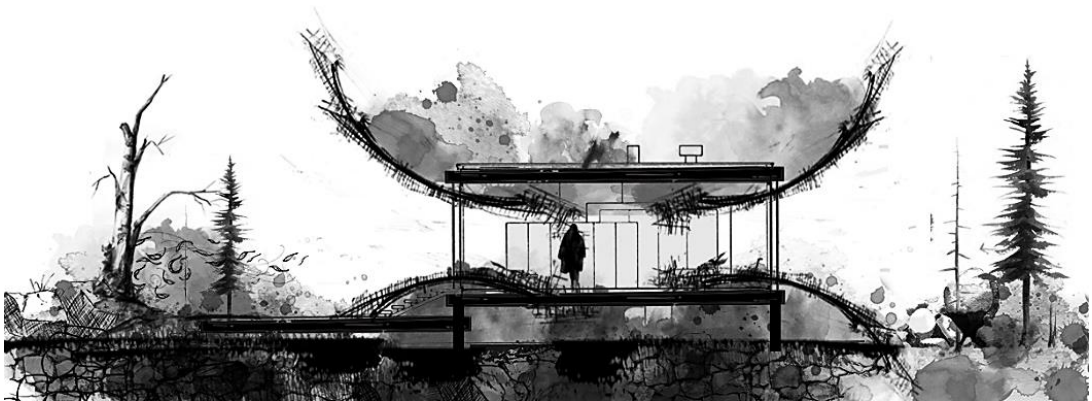


Figure 109. The Windows of Farnsworth House Interrupts the Essence of Shelter Due To Lack of Crusted Shell (by author)

Bringing Together Inside And Outside

Considering 'window' as 'Hypothetical Bridge' within dwelling, in fact 'window' is a continuity of the Void of Sky crossing over the Solidity of walls of dwelling. In other words, the Window joins two Voids (inside and outside) by a Void (Opening) within a Solid (wall). In this sense, through the 'bringing forth', the window interlocks the solidity of earth with the emptiness of sky in order to afford mortal man a perceptual link to provide life-giving natural components.

- Ann Cline's primitive hut

Remarkably, 'in the primitive hut the attitude of the Window in affording the perceptual way to man is in the way that hints man his lack of control over natural forces beyond (the presence of divinities). Ann Cline inside the primitive hut watches the fickleness of outside weather through the small window while taken in hug by the crusted shells of shelter, awaiting the peace of nature.



Figure 110. The Window Of Primitive Hut Brings Together Inside And Outside In The Way That Hints Man His Lack Of Control Over Natural Forces Beyond (by author)

- Mies van der Rohe's Farnsworth House

On the other hand within this perspective, the theoretical genesis of Farnsworth house is contrary to that of primitive hut. As mentioned in the 5.3.2.2.3 section, Mies designed the Farnsworth house grounded on his notion of 'Safe danger experience' in confronting nature. In view of this, he intentionally devised the orientation of the house to bring about the immediate experience of facing the fickleness of natural forces like flood. In his viewpoint, owing to technology, man became able to orientate his residence in a way to observe the fickleness of nature whilst being entirely safe.

However, in this sense, the issue that raises is, due to the extremist utilization of floor-to-ceiling glass windows in Farnsworth house, the window instead of alluding man his lack of control over natural forces beyond (the presence of divinities), implies to an intrusive revealing of nature. In this way, the Farnsworth house fails to gather the fourfold as a built thing due to the lack of interlocking to divinities.



Figure 111. Due to The Concept of 'Safe Danger' The Windows of Farnsworth Fail to Gather the Fourfold as a Built Thing Due To the Lack of Divinities (by author)

The Place of Window

The connection which window affords, immediately impacts man's daily life experience; in other words, window's bridging realigns the role of the wall in the daily immediate experience of dwellers. The emergence of the Window affects the way dwellers conceive their situation in relation to the place of the Window within the walls.

- **Ann Cline's primitive hut**

Before the emergence of the Window in primitive hut, all the spots along the wall were almost the same for the Cline. But only when the window emerged in one of the possibilities, that spot became the place of the window from that moment. In

this way, the window brought about concretization of space through Cline's daily use of the window. Accordingly, Cline specified each window as a 'place' for each of her daily activities. The obvious instance of this, is the window which she specified for her routine of tea backstage.

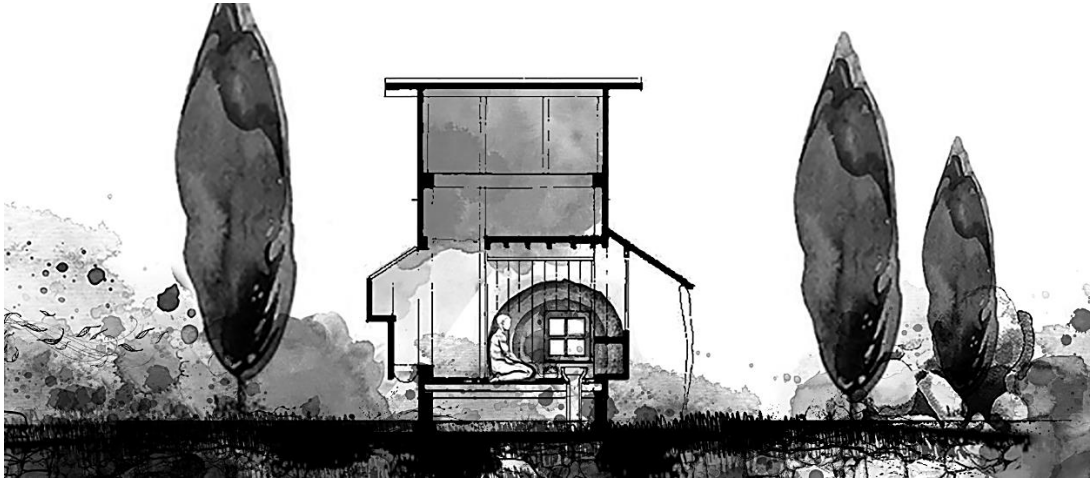


Figure 112. The Window of Primitive Hut Brought about Concretization of Space through Daily Use (by author)

- Mies van der Rohe's Farnsworth House

Conversely, in Farnsworth house no actual place is conceived through the presence of window since all the surfaces surrounding the box are transparent glass. The inpouring of sensory stimuli and consequently the patterns which are generated inside the space by the presence of window are monotonous within all the interior space. In view of this, the Farnsworth house fails to bring about place for window.



Figure 113. The Windows of Farnsworth Fails to Bring about Place of Window Due To Being Surrounded by Monotonous Sensory Patterns (by author)

Situating Man's Immediate Experience In Connection With Both Sides of the Wall

Window essentially links dweller's immediate experience with the other side of the wall. Consequently, the presence of the window situates man's immediate experience in connection with both sides of the wall, inside and the outside. In both of the samples, window is bringing about the simultaneous immediate experience of both inside and outside, however the extent of it differs in each sample. In Farnsworth house, due to the extensive inpouring and outpouring of sensory stimuli (because of the extreme transparency) the dweller inside and even the outside passer-by has an intensive immediate experience of the other side of the boundary of dwelling. On the other hand in Primitive hut, the low inpouring and outpouring of sensory stimuli creates a milder immediate experience of the other side for dweller.

'Holding Up' the One Who Crosses It

Window initiates a mutual ocular experience between the perceiver and other side of the wall; it is about both sides, dweller's perception of the outside and passerby's perception of the inside. Window allows the one who crosses the Window Frame to see the Outside world and simultaneously exhibits the one who crosses it. In this vein, the window does not show the 'world around' completely until the user get close to

the Window frame and present himself to the outside world. In this respect, the attitude of windows in two samples are fundamentally different.

- Ann Cline's primitive hut

In view of abovementioned, the minimal modest window literally 'holds up' the dweller within its limited frames and Cline reports that the window exhibits her to the outside nature only if she comes next to the window. In this sense, the ontological value which this window augments to the actuality of dwelling, is the fact that the modest window by dint of its 'Peras' (limited being through interlocking with fourfold), lets the crusted opaque walls to shelter the dweller from being exposed to the outside world. In fact, as Cline mentions, the modest window in primitive hut lets her to see the outside while she is embraced in the arms of the concrete shelter (Cline, 1997).



Figure 114. The Window Of Primitive Hut Lets Dweller To See The Outside While He Is Embraced In The Arms Of The Concrete Shelter By Dint Of 'Peras' (by author)

- Mies van der Rohe's Farnsworth House

Contrary to the primitive hut, Mies's intellectual orientation towards the attitude of window is based on intrusive revealing. In other words, owing to the prevalence of technological mind in spatial conception, the large floor-to-ceiling modern windows of Farnsworth house are showing off the dweller inside. In fact, due to the extensive transparency of encompassing boundaries of the house, the dweller inside is unceasingly showing off self to the surrounding nature (Goldberger, et al, 2010).



Figure 115. The Dweller inside Is Intrusively and Unceasingly Showing off Self to the Surrounding Nature (by author)

Determining Man's Understanding of the Other Side of the Wall In Relation To It

Regarding the foregoing discussion, the extent of the ocular connection through window depends on the situation of the user relative to the Window. As the user moves and gets close to the window frame, the intensity of his immediate experience to the other side increases to the maximum. This phenomenon occurs in both sides, inside and outside; from both the viewpoint of the outside passer-by looking at the window

of a house and from POV of the inside dweller looking outside through the window of his house. However, in view of this within two samples, the attitude of window is debatable.

- Ann Cline's primitive hut

According to Heidegger, the factual 'built-thing' realigns the configuration of the fourfold and the way they interlock dweller's immediate experience. The small modest window in primitive hut as a built-thing itself, reconfigures the role of the wall in the daily immediate experience of dwellers and passerby. As Cline describes, the window of her hut determines her ocular connection to the outside in relation to itself (Cline, 1997). In other words, the times when she sat far apart the window she had no immediate experience of the outside but as she came next to the it, it let her to see the outside immediately. In this sense, the small modest window in primitive hut underlies ontological values in relation with dweller; as Cline mentions, it seems like the window is alive (Cline, 1997). The small window of primitive hut gains this ontological dimension by dint of 'Peras'.

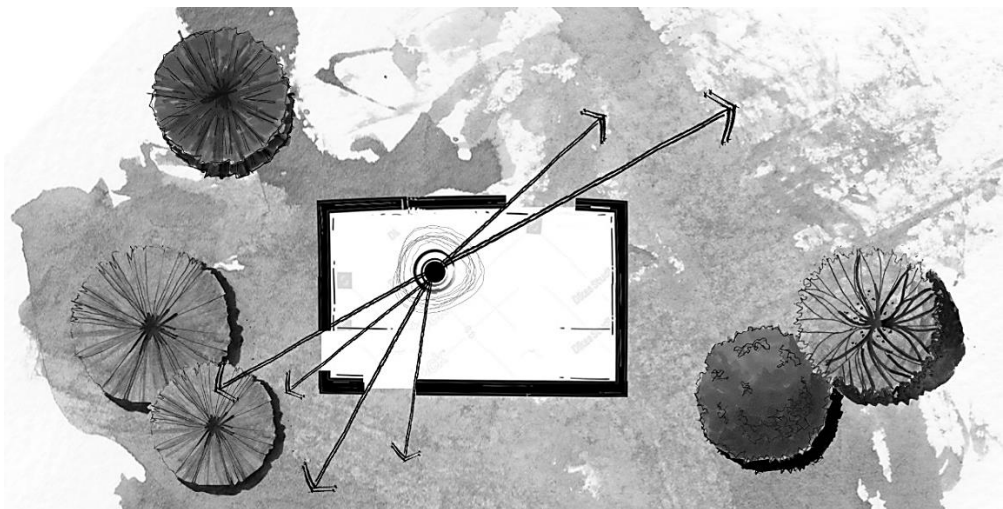


Figure 116. The Window of Primitive Hut Determines Dweller's Ocular Connection to the outside In Relation To Itself (by author)

- Mies van der Rohe's Farnsworth House

In contrast with the primitive hut, the window in Farnsworth has lost this quality due to its hunger for expansion. The large floor-to-ceiling windows cover all around the box of living, in the way that it is unceasingly revealing the dweller within itself and lost the ability to encompass a gradient of possibility of revelation or concealment of what is within it. In this regard, the dominative window of Farnsworth house lack the essence of 'Peras' and this leads to loss of abovementioned ontological dimension. Pallasmaa implies to this issue in large modern windows that they became merely an absence of wall (Pallasmaa, 1996).

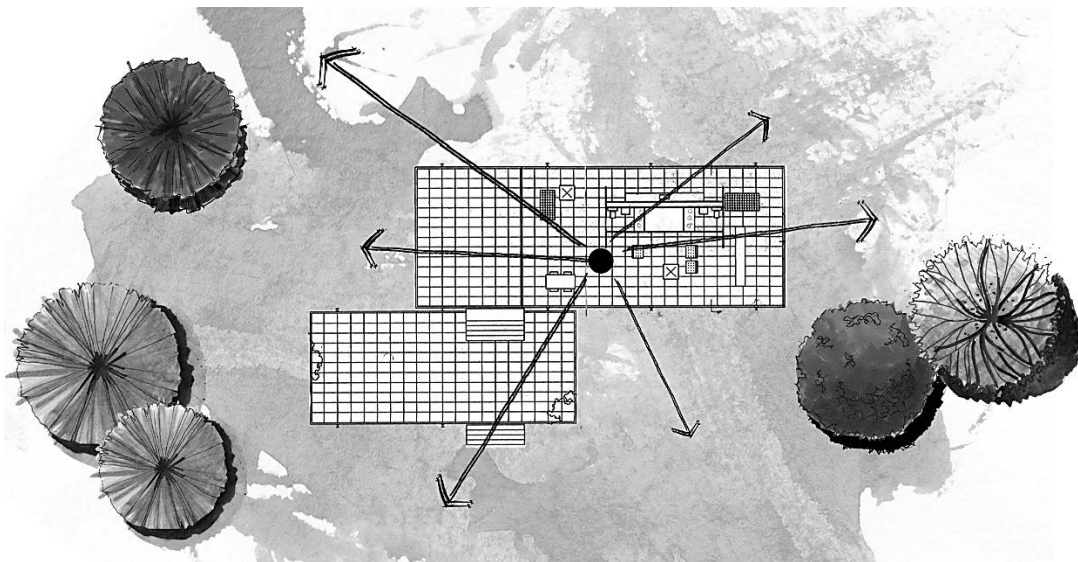


Figure 117. In Farnsworth the Ocular Connection of Dweller to the outside is Independent from Window (by author)

The Role of 'Window' in Ontological Values of Dwelling

Regarding the ontological values of dwelling which have been discussed thoroughly in 5.2 section, window as a 'built-thing' within dwelling, plays the key role in presence of specific ontological values. In this view, two fundamental values of 'protected intimacy' and 'hard core of beauty' in dwelling has been discussed. 'Hard core of beauty' sheds light on the core essence of the beauty in ordinary natural built-things.

Hard core of beauty in primitive hut makes man rooted to his own being-in-the-world as the ‘non-I’ which protects the ‘I’. The ‘protected intimacy’ in primitive hut Describes the way in which the immediacy of physical experience is augmented by twofold of imagination and memory only if the hut provides corners and deep shadows for dweller to curl up and bear reveries.

Accordingly on the one hand, window is the ontological response to the interaction between men’s twofold contradictory needs in relation to nature. On the other hand, the dialectics between window and the dark corners is controversially discussable. In view of that, the presence of these two items are discussed within the windows of two designated samples.

Window as ‘Poiesis’ Through Confronting Nature

The significance of window in dwelling, as Heideggerian ‘built-thing’ within another built-thing, is in the ontological response to dweller’s twofold contradictory needs in relation to nature. According to section 5.2.1, this ontological response (Poiesis) is brought forth in two different ways:

- Through inpouring due to the need for life-giving donations of nature;
- Through outpouring due to the need of reveries to be aware of storm outside to remember the significance of shelter.

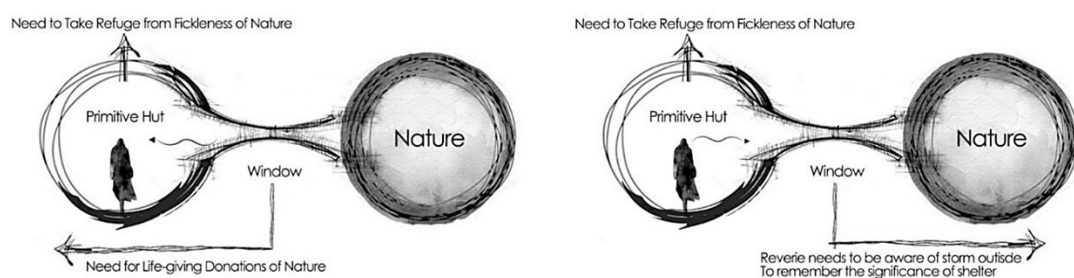


Figure 118. Window’s Ontological Response To Dweller’s Twofold Contradictory Needs In Relation To Nature Through Inpouring And Outpouring (by author)

- Ann Cline's primitive hut

According to section 5.3.2.1, the genesis of window in Ann Cline's primitive hut factually implies on the ontological response to the contradictory needs of 'taking refuge from fickleness of nature' and 'taking life-giving donations of nature'. As Cline describes in her book, as soon as she finished building her shelter (satisfying the need of taking refuge from fickleness of nature), she felt the need for taking light and air inside through contriving a window in her hut. She made the window through passing many cycles of build-dwell to balance the response to both contradictory needs. She kept doing trial and error through the interweaving of build dwell till the moment she felt the window is finally at rest.

Besides, the immediate haptic experience within the cycle of build dwell lead to the factual relationship of the window as built-thing with the fourfold constituents of the world. In view of that, the window in primitive hut encompasses the ontological response to the 'need of reveries to be aware of storm outside to remember the significance of shelter'. The descriptions of Ann Cline of her childhood reveries of warm aura of haptic protection and intimacy in confronting with raging wind while she was making the window of her Hut, are the possible traces of it.

- Mies van der Rohe's Farnsworth House

Due to the intellectual grounding of Mies in building Farnsworth house, and his obvious orientation on the role of technology in man's relation with nature through the build environment, the Farnsworth house comprises both ontological responses but in an intrusive way. For instance, the Farnsworth house takes the life-giving matters of nature through extensive large plates of glass with no crusted shell to

hide which intrusively reveals the need of light and view for the dweller which humiliates fickleness of nature.

On the other side, as it is reported in literature (Goldberger, et al, 2010), one of the main intentions of Mies in designing Farnsworth house is to arouse dreams of the dweller. In Mies's conception, the wholly transparent boundary of the house will interlock the perception of inside to the outside world and this might awaken the dreams (Hilberseimek, 1956). But the moot point raises here; according to the reports of the dwellers, the extensive floor-to-ceiling windows in Farnsworth house arouse reveries about the surrounding nature but not the reveries implying on curling up within deep corners of the crusted shell to be safe from storm outside (Goldberger, et al, 2010). On the contrary the expansive windows of this project, imply on the dominant tendency of dweller and his built-thing to the surrounding nature which is not fearful of the fickleness of nature any more, instead his built-thing is subduing and watching the roaring of natural forces.

Dialectics between Window and Dark Corners

According to the discussions in 5.2.2 section, there is a dialectical opposition between the 'augmentations of home experience with reveries' and 'dweller's need for natural components'. Below, is a discussion on the presence of this ontological value in the samples.

- Ann Cline's primitive hut

The limited modest window in primitive hut grants the inpouring of necessary light for dwelling, but simultaneously allows some areas of the hut to be dark and encompassed by dark shadow. According to Pallasmaa (1996), the dimmed corners and shadows play a very important role in augmentation of home experience with

reveries. Moreover, Bachelard emphasizes that the dark corners of the house are essential for awaking reveries of intimacy (Bachelard, 1994). In this sense, the limited window of primitive hut brings forth Poiesis through encompassing two contradictory needs of ‘awaking reveries of intimacy’ and ‘granting the inpour of light’.

- Mies van der Rohe’s Farnsworth House

In spite of the fact that the full transparency of boundaries in Farnsworth house creates the aura that arouses reveries, the reveries that reported by dwellers do not imply on intimacy (Goldberger, et al, 2010). Due to the full transparency of boundaries coupled with the low width of the residential box (about 6 meter), no corner with deep shadows will be generated (Herzog & Meuron, 2016). In other words the interior space of Farnsworth house is drowned in light. Obviously increasing the extent of light inpouring through the window will interrupt the dim corners and deep shadows and accordingly the dweller will loss the reveries of intimacy in space.

Final Synthesis

In the long run, the following (Table 5) is the comparative synthesis of conceptual layers of windows which have been explored in both designated samples.

Table 5. Comparative Synthesis of Conceptual Layers of Windows Which Have Been Explored in Both Designated Samples (by author)

			PRIMITIVE HUT	FARNSWORTH HOUSE
Window as a Built-Thing	Window as Hypothetical Jug	Bringing Forth the Gift of Pouring	Brings Forth the Gift of Pouring Through 'Poiesis'	Brings forth the Gift of Pouring But Through Intrusive Revealing
	Window as Hypothetical Bridge	Swinging Over Wall	Not disrupting the role of the bounds of shelter by dint of 'Peras'	Interrupts the essence of shelter due to lack of crusted shell
		Bringing Together Inside And Outside	in the way that hints man his lack of control over natural forces beyond	Concept of 'safe danger' fails to gather the fourfold as a built thing due to the lack of divinities
		The Place Of Window	window brought about concretization of space through daily use	Fails to bring about place of window due to being surrounded by monotonous sensory patterns
		Situating Man's Immediate Experience In Connection With Both Sides Of The Wall	the low inpouring and outpouring of sensory stimuli creates a milder immediate experience of the other side	intensive immediate experience of the other side due to extensive inpouring and outpouring of sensory stimuli
		Holding Up The One Who Crosses It	window in primitive hut lets dweller to see the outside while he is embraced in the arms of the concrete shelter by dint of 'Peras'	the dweller inside is intrusively and unceasingly showing off self to the surrounding nature
		Determining Man's Understanding Of The Other Side Of The Wall In Relation To It	determines dweller's ocular connection to the outside in relation to itself	The ocular connection of dweller to the outside is independent from window
	Role of Window in Ontological Values of Dwelling	Window As Poiesis Through Confronting Nature	ontological response to the contradictory needs of 'taking refuge from fickleness of nature' and 'taking life-giving donations of nature'	takes the life-giving matters of nature through extensive large plates of glass which intrusively reveals the need of light and view for the dweller which humiliates fickleness of nature.
			encompasses the ontological response to the 'need of reveries to be aware of storm outside to remember the significance of shelter'	imply on the dominant tendency of dweller and his built-thing to the surrounding nature which is not fearful of the fickleness of nature
		Dialectics Between Window And Dark Corners	brings forth Poiesis through encompassing two contradictory needs of 'awaking reveries of intimacy' and 'granting the inpour of light'.	Intensive inpouring of light through the window will interrupt the dim corners and deep shadows and accordingly the dweller will loss the reveries of intimacy in space

Chapter 6

CONCLUSION

Above all, this research has attempted to have a new reading of Heideggerian philosophy on the notion 'dwelling' and 'Built-thing', aimed to drive a particular theoretical framework in the discipline of architecture. In this sense, windows as one of the distinguished architectural components of space have been under investigation.

In this ground, to emphasize, windows have always been considered as one of the most crucial elements of architecture in the way that lack of this element causes the inability of space to encompass life within. These days with the high speed of technological improvements of architectural elements, the vital factors of windows are being considered as lighting, ventilation and energy efficiency. Subsequently, the hunger for the maximum intake of light has become the determining factor in creation of window and deriving to prevalence of extensive floor-to-ceiling windows. Whereas significant literature indicates that the domination of calculative mind in technological headways of architecture lead to the loss of some ontological dimensions in windows. The essence of ontological dimensions in dwelling has been widely investigated by various architectural theorists who mostly grounded their theoretical framework on philosophy of Heidegger as the touchstone of ontological notions in 'dwelling' and the factual essence of 'built-thing'.

In this regard, various approaches have been put forward to give Heideggerian notions of dwelling a concretized architectural form; however, the essence of latent ontological dimensions of window as Heideggerian Built-thing seems to be overlooked in literature.

In view of that, this study sheds new light on ontological dimensions of window as Heideggerian Built-thing. This thesis is believed to be a new attempt furthering the studies on disregarded dimensions of window. Extracting the conceptual layers of built-thing through Heideggerian conception, outlines the contribution of this research within the body of existing literature on window. It is thought that explications in this research will assist researcher with mutual interests to deepen the studies on latent dimensions of window and the respective influences on dwelling.

To attain the abovementioned, Heidegger's philosophical conceptions of 'built-thing' and his key hypothetical samples of it in daily life ('Hypothetical Jug' and 'Hypothetical Bridge') has been explicated through an inclusive structured literature survey. Accordingly, specific conceptual layers has been extracted from mentioned hypothetical samples of built-thing coupled with the notable ontological values in dwelling which has been addressed by foremost existing literature ('protected intimacy' and 'hard core of beauty'). Thereupon, within the crux interpretations of this study, conceptual nexus have been brought forward between Heideggerian hypothetical samples of built-thing and window as a 'built-thing' through elucidating mutual themes by logical argumentation.

In this context, the synthesis of findings addressed six core conceptual layers for window which has been illustrated in (Figure 107). The derivative conceptual layers

define window as a ‘Hypothetical bridge’ within a ‘Hypothetical Jug’ (dwelling), which grants ‘ontological values’ for dwelling through *Poiesis*. The authenticity of each hypothetical theme (Hypothetical bridge, Hypothetical Jug, ontological values) determines specific conceptual layers. In view of that, to explore the presence of the extracted conceptual layers of window within actuality of architecture, sample study have been undertaken. The two designated samples have been regarded as the representatives of two dialectical mindsets of technological mind and meditative thinking specifically toward the creation of window (Ann Cline’s Primitive Hut and Mies van der Rohe’s Farnsworth house).

The analysis of samples revealed that the presence of specific conceptual layers within the window of ‘Farnsworth House’ seems debatable. In this sense, Table 5 reveals the results of the comparative synthesis of conceptual layers of window in two samples. According to Table 5 the followings are the noteworthy outcomes of the synthesis according to the conceptual layers:

- Window as Hypothetical Jug:

Windows in both of the samples bring forth the gift of pouring but within divergent ways; Primitive Hut through ‘Poiesis’ and Farnsworth House through ‘Intrusive revealing’.

- Window as Hypothetical Bridge:

- Swinging over wall: the primitive hut do not disturb the role of the crusted bounds of shelter by dint of ‘peras’ so it swings over wall; However, the Farnsworth House fails to swing over wall due to interrupting the essence of shelter because of the lack of crusted shell in the bounds.

- Bringing together inside and outside: both of the samples bring together inside and outside but through divergent ways; primitive hut brings inside and outside together in the way in which hints man his lack of control over natural forces beyond; at the same time the Farnsworth house because of the concept of ‘safe danger’ fails to gather the fourfold as a built-thing due to the lack of divinities.
- The place of window: the window in primitive hut brings about concretization of space through daily use; however the Farnsworth house fails to bring about the place of the window due to being surrounded by monotonous sensory patterns.
- Situating man’s immediate experience in connection with both sides of the wall: the low inpouring and outpouring of sensory stimuli creates a milder immediate experience of the other side. At the same time the intensive immediate experience of the other side due to extensive inpouring and outpouring of sensory stimuli in Farnsworth house creates an intensive immediate experience of the other side.
- Holding up the one who crosses it: window in primitive hut lets dweller to see the outside while he is embraced in the arms of the concrete shelter by dint of ‘peras’; However, the dweller inside the Farnsworth house is intrusively and unceasingly showing off self to the surrounding nature.
- Determining man’s understanding of the other side of the wall in relation to it: the Primitive Hut determines dweller’s ocular connection to the outside in relation to itself; at the same time in Farnsworth house, the ocular connection of the dweller to the outside is independent from window’s presence.
- Role of window in ontological values of dwelling:
 - Window as Poiesis through confronting nature:

- The window of Primitive Hut is an ontological response to the contradictory needs of ‘taking refuge from fickleness of nature’ and ‘taking life-giving donations of nature’; however the window of Farnsworth house takes the life-giving matters of nature through extensive large plates of glass which intrusively reveals the need of light and view for the dweller which humiliates fickleness of nature.
- The window in Primitive Hut encompasses the ontological response to the ‘need of reveries to be aware of storm outside to remember the significance of shelter’; however the window in Farnsworth house imply on the dominant tendency of dweller and his built-thing to the surrounding nature which is not appreciating the fickleness of nature.
- Dialectics between window and dark corners: the window in primitive Hut brings forth the Poiesis through encompassing two contradictory needs of ‘rising the reveries of intimacy’ and ‘granting the inpour of light’; however the intensive inpouring of light through the window will interrupt the dim corners and deep shadows and accordingly the dweller will loss the reveries of intimacy in space.

Interestingly, through comparative analysis of conceptual layers of windows which have been explored in both designated samples, the trace of a crucial factor is recognizable, the concept of ‘Peras’. As can be seen in the analysis, strong evidences have been found that indicate on the significance of ‘Peras’; the boundary which is not that at which something stops but, as Heidegger mentions, that from which something begins its presencing. This echos Heidegger's insights on the positive sense of the limit

and of finitude. In fact, the presence of the place of a built-thing in experience is originated from the bounded or limited situatedness of existence.

This point, elucidates the way in which the modest limited window of Primitive hut as a built-thing, brings forth the ontological dimensions to the dwelling by dint of 'Peras'. Therefore, the extensive plate of window in Farnsworth house, fails to encompass the conceptual layers as a 'built-thing', In spite of the maximum lighting efficiency which it brings about. Manifestly, due to the domination of calculative thinking of technological mind, the window in Farnsworth house is grounded on intrusive revealing whereas the modest window in primitive hut is grounded on bringing forth through 'Poiesis'; the 'Poiesis' which comes about as an ontological response to the contradictory needs of dweller towards nature. In conclusion, the results of the analysis indicate on the significance of 'Peras' in the 'Poiesis' which window brings forth for dweller.

REFERENCES

- Alberti, L. B., Bartoli, C., & Leoni, G. (1987). *The Ten Books on Architecture*. New York: Dover Publications Inc.
- Bachelard, G. (1994). *The poetics of space* (Vol. 330). Beacon Press.
- Bachelard, J. (2013). *Towards an Articulated Phenomenological Interpretation of Architecture*. Florence: Taylor and Francis.
- Barbaza, R. E. (2003). *Heidegger and a new possibility of dwelling*. Frankfurt am Main: Peter Lang.
- Benevolo, L. (1980). *History of modern architecture*. Cambridge: M.I.T. Press.
- Bille, M., & Sorensen, T. F. (2016). *Elements of architecture. Assembling archaeology, atmosphere and the performance of building space*.
- Borgmann, A., & Mitcham, C. (January 01, 1987). *The question of Heidegger and technology: A critical review of the literature*. Philosophy Today, 31.
- Braver, L. (2014). *Heidegger: Thinking of Being*. Cambridge: Polity.
- Brogan, W. (2005). *Heidegger and Aristotle: The twofoldness of being*. Albany: State University of New York Press.

Brooker, G., & Stone, S. (2009). *Basics Interior Architecture 04: Elements/Objects*.
AVA Publishing.

Cable, C. (1984). *The primitive hut: Ideal and real*. Monticello, Ill: Vance
Bibliographies.

Capobianco, R. (2010). *Engaging Heidegger*. Toronto [Ont.: University of Toronto
Press

Casey, E. S. (2009). *Remembering: A phenomenological study*. Indiana University
Press.

Cerbone, D. R. (2014). *Understanding Phenomenology*. Hoboken: Taylor and Francis.

Ching, F. D. K. (2015). *Architecture: Form, space, & order*. Hoboken (N.J.: J. Wiley
& Sons.

Cline, A. (1997). *A hut of one's own: life outside the circle of architecture* (Vol. 17).
Cambridge, MA: Mit Press.

Collin, I. D., & Collins, E. J. (2012). *Window selection: A guide for architects and
designers*. London: Newnes-Butterworths.

Conway, H., & Roenisch, R. (2005). *Understanding architecture: an introduction to
architecture and architectural history*. Psychology Press.

Court, R. (2003). *Space*. Chanhassen, MN: Child's World.

Crisman, P. *The Magic Of The Real: material and tactility in the work of Peter Zumthor*.

Dahl, T. (2010). *Climate and architecture*. Milton Park, Abingdon, Oxon: Routledge.

Dongyang, L. (2010). *Peter Zumthor and Augen Gneiss Stone: Reflections on the Notion of Architectural Materiality*. New Architecture, 1, 005.

Edwards, B. P. (1979). *Architectural sequence: formal elements of spatial experience*. University of California, Berkeley.

Favole, P. (2012). *The story of modern architecture*. Munich: Prestel.

Frampton, K., & Thames and Hudson. (2014). *Modern architecture: A critical history*. London: Thames & Hudson.

Freytag, J. A. (2017). *Phenomenology: Experience through architecture* (Doctoral dissertation).

Gauthier, D. J. (2004). *Martin Heidegger, Emmanuel Levinas, and the politics of dwelling* (Doctoral dissertation). Lanham: Lexington books.

Goldberger, P., Lambert, P., & Lavin, S. (2010). *Modern views: Inspired by the Mies van der Rohe Farnsworth House and the Philip Johnson Glass House*. New York, NY, USA: Assouline Pub.

Gropius, W. (1974). *Scope of total architecture*. New York: Collier Books.

- Gullberg, J. (2016). *Voids and bodies: August Schmarsow, Bruno Zevi and space as a historiographical theme*. (Journal of art historiography.)
- Guy, A. G. (2013). *Oneiric Hut* (Master's thesis, University of Waterloo).
- Halliburton, David (1981) *Poetic Thinking: An Approach to Heidegger*, Chicago & London: University of Chicago Press)
- Hamlin, A. D. F. (1896). *History of Architecture*. Biblo & Tannen Publishers.
- Harman, G., & Recorded Books, Inc. (2011). *Heidegger Explained: From Phenomenon To Thing*. New York: Open Court.
- Harris, L. F., & Bachelard, G. (2011). *First house physically inscribed*. San Francisco, Calif.: Lyall F. Harris.
- Harvey, D. (2000). *The condition of postmodernity*. Cambridge, Mass: Blackwell.
- Heidegger, M. (1971). *Poetry, Language, Thought*: Translations and Introduction by Albert Hofstadter. Harper & Row.
- Campbell, S. M. (2013). *Basic problems of phenomenology*: Winter semester 1919/1920. London: Bloomsbury.
- Heidegger, M., & Lovitt, W. (1977). *The question concerning technology, and other essays* (p. 3). New York: Harper & Row.

Heidegger, M., & Stambaugh, J. (1977). *The end of philosophy*. Chicago: The University of Chicago Press.

Heidegger, M., Fried, Gregory, & Polt, Richard. (2014). *Introduction to metaphysics*. New Haven: Yale Univ Pr.

Heidegger, M., Gray, J. G., & Wieck, F. (1973). *What is called thinking?*. London: Harper and Row.

Heidegger, M., Macquarrie, J., & Robinson, E. (1962). *Being and time*. Malden, MA: Blackwell.).

Heidegger, Martin, (1971), *Poetry, Language, Thought* , tr. Albert Hofstadter, New York: Harper Collins

Herzog, J., & Meuron, P. (2016). *Treacherous transparencies: Thoughts and observations triggered by a visit to the Farnsworth House*.

Hilberseimer, L. (1956). *Mies van der Rohe*. Chicago: P. Theobald.

Hoffmann, D. (1998). *Frank Lloyd Wright, Louis Sullivan, and the skyscraper*. Mineola, N.Y: Dover Publications.

In Mindrup, M. (2014). *The material imagination: Reveries on architecture and matter*. Burlington: Ashgate.

- Janicaud, D., & Mattéi, J.-F. (1995). *Heidegger from metaphysics to thought*. Albany: State University of New York Press.
- Jay, M. (2009). *Downcast eyes: The denigration of vision in twentieth century French thought*. Berkeley, Calif. [u.a.: Univ. of California Press.
- Jia, J. J., Liu, S. F., & He, X. J. (2013). *Peter Zumthor Ideas of Architectural Creation*. In Applied Mechanics and Materials (Vol. 423, pp. 1183-1186). Trans Tech Publications.
- Johnson, P. A. (2000). *On Heidegger*. Belmont, CA: Wadsworth Thomson Learning.
- Kahn, L. I., & Buttiker, U. (1994). *Louis I. Kahn: Light and space*. New York: Wihtney Library of Design.
- Kennedy, M. (2011). *Home: A Bachelardian concrete metaphysics*. Oxford: Peter Lang.
- Kim, Y. O. (1999). *Spatial configuration, spatial cognition and spatial behaviour: The role of architectural intelligibility in shaping spatial experience*. University of London.
- Kleinberg-Levin, D. M. (1999). *Sites of vision: The discursive construction of sight in the history of philosophy*. Cambridge, Mass: MIT Press.

- Kroker, A. (2015). *The will to technology and the culture of nihilism: Heidegger, Nietzsche and Marx*.
- Lane, B. M. (2006). *Housing and dwelling: Perspectives on modern domestic architecture*. New York: Routledge.
- Lawson, B. (2015). *Language of space. Place of publication not identified*: Routledge.
- Le, C., & Benton, T. (2015). *Precisions. On the present state of architecture and city planning*. New expanded ed. Zürich: Park Books.
- Lefaivre, L., & Tzonis, A. (2004). *The emergence of modern architecture: A documentary history from 1000 to 1810*. London: Routledge, Taylor & Francis Group.
- Lefas, P. (2009). *Dwelling and architecture: From Heidegger to Koolhaas*. Berlin: Jovis Verlag GmbH.
- Levin, D. M. (2008). *Modernity and the hegemony of vision*. Berkeley [u.a.: Univ. of California. Pr.
- Malpas, J. (2012). *Heidegger and the thinking of place: Explorations in the topology of being*. Cambridge, Mass: MIT Press.
- Manginē, G. (January 01, 2014). *On the status of technology in Heidegger's "Being and Time"*. *Studia Philosophiae Christianae*, 79-110.

Martin Heidegger. (1977). *Letter on Humanism*. London: Routledge.

McCarter, R. (2016). *The space within: Interior experience as the origin of architecture*. London: Reaktion Books.

McCarter, R., & Pallasmaa, J. (2012). *Understanding architecture: A primer on architecture as experience*. London: Phaidon.

Melville, S., & Readings, B. (1995). *Vision and textuality*. Houndmills: Macmillan.

Mindrup, M. (Ed.). (2015). *The Material Imagination: Reveries on Architecture and Matter*. Ashgate Publishing, Ltd..

Mitchell, A. J. (2015). *The fourfold: Reading the late Heidegger*. Evanston, Illinois: Northwestern University Press.

Mitrovic, B. (2011). *Philosophy for architects*. New York: Princeton Architectural Press.

Moore, C. W., & Allen, G. (1976). *Dimensions: Space, shape & scale in architecture*. New York: Architectural Record Books.

Moran, D. (2014). *Introduction to Phenomenology*. Oxford, England: Taylor & Francis.

Mugerauer, R. (2015). *Responding to loss: Heideggerian reflections on literature, architecture, and film*.

Murray, M. (1978). *Heidegger and modern philosophy: Critical essays*. New Haven: Yale University Press.

Norberg-Schulz, C. (1990). *Existence, space & architecture*. New York: Praeger.

Odgers, J., Samuel, F., & Sharr, A. (2006). *Primitive: Original matters in architecture*. London: Routledge.

Okakura, K. (1964). *The book of tea*. New York: Dover. 30-31

Paley, W., & Meadley, G. W. (1810). *The works of William Paley, D.D.*: In five volumes. Boston: Published by Farrand, Mallory.

Pallasmaa, J. (2007). *The architecture of image: Existential space in cinema*. Helsinki: Rakennustieto.

Pallasmaa, J. (2011). *The embodied image: Imagination and imagery in architecture*. Chichester: John Wiley.

Pallasmaa, J. (2011). *The thinking hand: Existential and embodied wisdom in architecture*. Chichester: Wiley.

Pallasmaa, J. (2014). *The eyes of the skin: Architecture and the senses*. Chichester: Wiley.

Pallasmaa, J., & MacKeith, P. B. (2006). *Archipelago: Essays on architecture : for Juhani Pallasmaa*. Helsinki: Rakennustieto.

- Parker, T. (2001). *Martin Heidegger: Dwelling and Its Ethical Import* (Doctoral dissertation, California State University, Long Beach).
- Passinmäki, P. (2015). *Architecture beyond signs and symbols: Zumthor's response to the problems of aesthetics*. *arq: Architectural Research Quarterly*, 19(4), 329-332.
- Petty, M. M. (2010). "Edge of Danger": *Electric Light and the Negotiation of Public and Private Domestic Space in Philip Johnson's Glass and Guest Houses*. *Interiors*, 1(3), 197-217.
- Pilkington Sun Angle Calculator. 1975. The Pilkington Sun Angle Calculator
- Platt, C., & Spier, S. (2010). *Seeking the real: the special case of Peter Zumthor*. *Architectural Theory Review*, 15(1), 30-42.
- Plummer, H. (2016). *The Experience of Architecture*. Thames & Hudson.
- Randall, C. T. (2002). *The encyclopedia of window fashions*. Orange, Calif: Randall International.
- Rehm, R. (2002). *The play of space: spatial transformation in Greek tragedy*. Princeton University Press.
- Relph, E. (1976). *Place and placelessness* (Vol. 1). Pion

- Richardson, W. J., & Heidegger, M. (2011). *Heidegger: Through Phenomenology to Thought*. New York: Springer.
- Ricœur, P. (2007). *Husserl: An analysis of his phenomenology*. Evanston, Ill: Northwestern University Press.
- Roth, L. M., & Clark, A. R. (2013). *Understanding architecture: Its elements, history, and meaning*. Westview Press.
- Blake, W. S. (2004). *Archi-texture: meditations on the mediations of dwelling* (Doctoral dissertation, Murdoch University).
- Rykwert, J. (1997). *On Adam's house in paradise: The idea of the primitive hut in architectural history*. Cambridge, Mass. [u.a.: MIT Press.
- Safranski, R. (2002). *Martin Heidegger: Between good and evil*. Cambridge, Mass: Harvard University Press
- Sajama, S., & Kamppinen, M. (2015). *A historical introduction to phenomenology*. London: Routledge, Taylor & Francis Group.
- Sartre, J.-P., Elkaïm-Sartre, A., & Aronson, R. (1992). *Truth and existence*. Chicago: University of Chicago Press.
- Schatzki, T. R. (2007). *Martin Heidegger: theorist of space*. Stuttgart: Steiner.

Schelling, F. W. J. (1980). *Philosophie der Kunst*. Darmstadt: Wissenschaftliche Buchgesellschaft.

Schinaia, C., & Lo, D. G. (2016). *Psychoanalysis and architecture: The inside and the outside*. Karnac Books

Schmidt, L. (November 01, 2001). *Psychological aspects of space: house, psyche and body*. South African Journal of Art History, 15, 1, 102-114.

Sharr, A. (2010). *Heidegger for architects*. London [u.a.: Routledge.

Sigfried, G. (2013). *Architecture and the phenomena of transition*. Cambridge: Harvard Univ Press.

Steiner, G. (1991). *Martin Heidegger*. University of Chicago press.

Stenstad, G. (2006). *Transformations: Thinking after Heidegger*. Madison, Wis: University of Wisconsin Pr Gail Stenstad ess.

Stevens, W., In Beyers, C., & In Serio, J. N. (2015). *The collected poems of Wallace Stevens*. New York: Vintage Books, a division of Penguin Random House LLC.)

Tkachyk, D. (1994). *Heidegger, technology, and the saving power of art*. Routledge.

Tonner, P. (2017). *Dwelling: Heidegger, Archaeology, Mortality*. Routledge.

- Tutter, A. (2011). *Design as dream and self-representation: Philip Johnson and the Glass House of Atreus*. Journal of the American Psychoanalytic Association, 59(3), 509-548.
- Unwin, S. (2014). *Analysing architecture*. London [u.a.: Routledge.]
- Van, S. L., & Lyssiotis, P. (2002). *Poetics in architecture*. London: Architectural Design.
- Von, Meiss. P. (2014). *Elements of architecture: From form to place*. Routledge.
- Walsh, J. H. (1963). *Heidegger's Understanding of No-thingness*. CrossCurrents, 13(3), 305-323.
- Watts, M. (2014). *The philosophy of Heidegger*. Routledge.
- Wright, F. L. (1987). *The destruction of the box*. S.l.: FDN.
- Zevi, B., & Barry, J. A. (1993). *Architecture as space: How to look at architecture*. New York: Da Capo Press.
- Zumthor, P., Oberli-Turner, M., Schelbert, C., & Binet, H. (2006). *Thinking architecture* (Vol. 113). Boston: Birkhäuser.