



# AN ACCIDENTAL ARCHITECTURE

THE ARCHITECTURE OF THE IMPERFECT

KAVOSH MALEKI



**AN ACCIDENTAL ARCHITECTURE  
THE ARCHITECTURE OF THE IMPERFECT**

by

Kavosh Maleki

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Accidental Architecture  
The Architecture of the Imperfect  
Kavosh Maleki  
Master of Architecture, 2019  
Architecture Program, Ryerson University

## **ABSTRACT**

Accidental architecture is an imperfect architecture due to the contingent reality of the world. An accidental architecture abandons the futile binaries of form and function and the telos(end goal) of Pure Formalism, Pure Functionalism and absolute accuracy in form-function relations in favour of the poetic interplay and collisions(metaphors) of things—any entities—to create objects through accident. This change of approach from teleological to accidental architecture allows for a new form of aesthetics, an accidental aesthetic that is more than just the subsequent product of form-function relations, an aesthetic that has the same hierarchy with the notions of form and function. This thesis explores accident as a mode of design to create an imperfect architectural object, an accidental architectural object.



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To My Family



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## 0.1. Introduction

The goal-driven nature of humankind has always been the initiative and the catalyst for progress throughout history. However, this productive relationship with goal setting has grown to include the concept of an ultimate but unachievable goal (telos) and, within the last five hundred years, developed into a fanatical captivation with the ambition of achieving absolute perfection. Combined, these result in dogmatic approaches with an often catastrophic outcome. The field of architecture is also susceptible to this telos-driven fanaticism and dogma. This fascination with the unachievable telos within architecture can be traced back to the notion of the Vitruvian triad, which divides the architectural object into three discreet aspects: “firmness,” “commodity,” and “delight”.<sup>1</sup> Under the influence of the scientific and technological advancements during the industrial era, as well as a result of optimization through a reductionist approach, these three aspects of the architectural object (firmness, commodity, and delight) evolved (reduced) into two notions of form and function by the end of the 19th century. The result of this change was that the aspect of “delight” was reduced to a subsequent product of firmness-commodity or form-function relations. In other words, the question of aesthetics in architecture was placed at a lower priority in favour of the optimization of functionality.



This division allowed for a further categorization of the architectural object into its material and immaterial qualities, which are in relation to one another through geometry. The binary division of the architectural object and the connection to geometry allowed for the growth of extreme ideas, such as pure functionalism under the maxim of “form ever follows function”<sup>2</sup>, coined by Louis Sullivan, and the pure formalism of early postmodernism with historic revivalist references. However, due to the contingent reality of the world, reaching either extreme telos (pure functionalism and pure formalism) is impossible. From this inability to achieve these extreme goals and the resulting lack of telos, a certain nihilism appears. The concept of accident suggests a way towards architectural freedom and a new approach towards the question of aesthetics.

By going beyond the binary notions of form and function and consequent futile teloses of pure formalism and pure functionalism, this thesis explores accident as a mode of design for making of an accidental architectural object and a consequent accidental aesthetic. As such, it investigates the notion of accidental poetics and poetic collisions within architecture through the concepts of causality/metaphor in an accident (event). This poetic framework is then applied to further research in architectural representation, resulting in what this thesis deems as “action drawing.” Action drawing is used for the composition of an accidental architecture: the house of accidents and the consequent accidental aesthetic.

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1. Morgan, Morris Hicky. 1914. *Vitruvius The Ten Books on Architecture*. Cambridge: Harvard University Press. Page 17

2. Sullivan, Louis Henry . 1896. "The Tall Office Building Artistically Considered." *Lippincott's*, March 23: 403-408.



# CHAPTER 1



## 1.1. Understanding the Architectural Object

The architectural object is a subsequent product of architecture as a field of study and a design practice that carries a shifting and abstract meaning and encompasses certain values. The architectural object also contains significant relations and most importantly poetics. It is a term that is also often used to express an object produced by architecture, mostly buildings. Hence, it is a term that seems to be universally understood and liberally used. However, understanding the architectural object has been shown to be a challenge. The architectural object is the complex specimen that throughout the history of architecture has been elaborated on, broken into parts and characteristics, or built up as the whole of parts—all aiming towards understanding architecture.

### 1.1.1. Form and Function

The earliest known attempt at comprehending and dissecting the architectural object can be traced back to the text written on the topic of architectural theory, *De Architectura*, written by Vitruvius. Outlined in the Book I, Chapter 3, he divides the characteristics of an architectural object into his famous triad of “firmitatis, utilitatis, venustatis”<sup>3</sup>, i.e., firmness, commodity and delight:

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3. Morgan, Morris Hicky. 1914. *Vitruvius The Ten Books on Architecture*. Cambridge: Harvard University Press. Page 17



*All these should possess strength, utility, and beauty. Strength arises from carrying down the foundations to a good solid bottom, and from making a proper choice of materials without parsimony. Utility arises from a judicious distribution of the parts, so that their purposes be duly answered, and that each have its proper situation. Beauty is produced by the pleasing appearance and good taste of the whole, and by the dimensions of all the parts being duly proportioned to each other.<sup>4</sup>*

The interpretation of this triad evolved through the centuries and, by the late 19th century, the notion of “venustatis” or delight was reduced to be only the resultant product of the relations between the two notions of firmness and utility, resulting in a binary opposition of form and function. To understand this two-partness of the architectural object, one should start with the definitions and potential reframing of each of these terms.

### **1.1.1.1. Form**

Let us start with the notion of form. The term “form” can relate to two distinct concepts. First, the word “form” as a verb would be the act of bringing together parts or combining them to create something which, in the context of architecture, relates to the act of organization and configuration of a concept or ideas, a thought or an object. This organization and configuration reveals the notion of creating delight through composing (forming) the relation between firmness and utility. The process resembles Plato’s notion of “form,” defined as *eidos* or *idea* as an archetype separate from the matter (*hyle*)<sup>5</sup>. The term “form” also serves as a noun, meaning:

*Form - The visible shape of something.<sup>6</sup>*

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4. Vitruvius, Marcus. “De Architectura Vitruvius Pollio:” LacusCurtius • Vitruvius on Architecture - Book I. December 4, 2017. Accessed June 08, 2019. [http://penelope.uchicago.edu/Thayer/E/Roman/Texts/Vitruvius/1\\*.html](http://penelope.uchicago.edu/Thayer/E/Roman/Texts/Vitruvius/1*.html). Book I, Chapter 3, Part 2

5. Hendrix, John Shannon. 2013. The Contradiction Between Form and Function in Architecture. Routledge. Page 1

6. Oxford Dictionaries, s.v. “form,” accessed June 8, 2019



which is a definition better suited to its use in regard to the discussion of the visual shape or appearance of an object. The suitability of this definition of form explored in the case of architectural objects (buildings) is evident in books ranging from Paul Frankl's *Principles of Architectural History* to Rudolf Arnheim's *The Dynamics of Architectural Form* and Peter Eisenman's *The Formal Basis of Modern Architecture*<sup>7</sup>.

### 1.1.1.2. Function

The term “function” as a noun defines an activity that is natural to the purpose of a person or thing<sup>8</sup>. Within the context of architecture, the term is commonly used as a mass noun to define practical use or purpose in design<sup>9</sup>. This definition of function can be traced through many works in architectural theory. For instance, Peter Eisenman writes within his Notes on Conceptual Architecture that “[t]here is no conceptual aspect in architecture which can be thought of without the concept of programmatic and functional objects”<sup>10</sup>. Alternatively, as Edward Robert de Zurko in *Origins of Functionalist Theory* states, “Functionalism is generally associated with ... the practical, material needs of the occupants of the building”<sup>11</sup>. This definition of the function is also similar to the notion of the function used as a criterion by ancient Greek philosophers, such as Plato and Aristotle<sup>12</sup>.

Through an observation of this dichotomy of an architectural object into the divergent properties of form and function, we discern the separation of the function and the form, respectively as indivisible and divisible, intangible and tangible, immaterial and material. With the designation of these two terms through these properties comes a new form of relationship

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7. Hendrix, John Shannon. 2013. *The Contradiction Between Form and Function in Architecture*. Routledge. Page 1.

8. Oxford Dictionaries, s.v. “function,” accessed June 8, 2019

9. Ibid.

10. Hendrix, John Shannon. 2013. *The Contradiction Between Form and Function in Architecture*. Routledge. Page 2

11. De Zurko, Edward Robert. 1958. *Origins of Functionalist Theory*. New York: Columbia University. Page 7.

12. Ibid. Page 37



that one can investigate, aiming towards a better understanding of the architectural object.

### **1.1.2. Material & Immaterial**

To further expand on the preliminary descriptions of the two notions of “form” and “function” in regard to the architectural object, one could characterise form as the tangible physical shape of an object that occupies the physical world, and function as the intangible purpose of an object that one perceives through the physical objects. Given this notion of tangibility, it is essential to recognise that at the most basic level, matter and energy are the elemental cores of the physical world, which includes the architectural object. Consequently, one could draw relations between the two pairs of form and matter as well as function and energy. However, before investigating these relations, it is vital to understand that what distinguishes matter from energy are the notions of intensive and extensive properties of matter<sup>13</sup>.

#### **1.1.2.1. Intensive and Extensive**

Intensive properties are the indivisible ones. Simply, any intensive property that is halved will preserve an equal property in both halves, such as in heat, colour, density, duration, weight and elasticity<sup>14</sup>. For example, a bar of brass divided in half will have the same colour, luster, density, and temperature in both halves. On the other hand, the extensive properties of the matter are divisible, which means that any extensive properties—such as total volume, measurements, and constraints—of a material object will be

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13. Reiser, Jesse, and Nanako Umemoto. 2006. *Atlas of Novel Tectonics*. New York: Princeton Architectural Press. Page 71-77.

14. Ibid. Page 71-77



halved if the matter itself is halved<sup>15</sup>. For instance, if the same bar of brass is divided in half, each of the two resultant bars will have half of the total volume of the initial brass bar or half the weight of the whole bar (fig. 1).

The connection between the notions of form and matter is through the notion of tangibility and divisibility. Form, as the physical shape of an object that occupies the material world, is tangible, and consequently divisible, making it subject to measurement and physical constraints, such as total volume. For example, a cube of wet clay has a physical limit and boundary that are set by measurements of height, length, and width, which create the volume of the tangible boundary of the cube of clay. Thus, one can assume that the notion of the form of an object is the result of the accumulation of the extensive properties of an object.

However, the pair of function and energy comprise a more complex relation. The notion of function, on the other hand, is intangible and therefore, similar to energy, indivisible. This makes the function of an object a derivative of the intensive properties of the matter. For instance, the function of a wooden mallet comes from the density of the wood used in the making of that mallet (fig. 5).

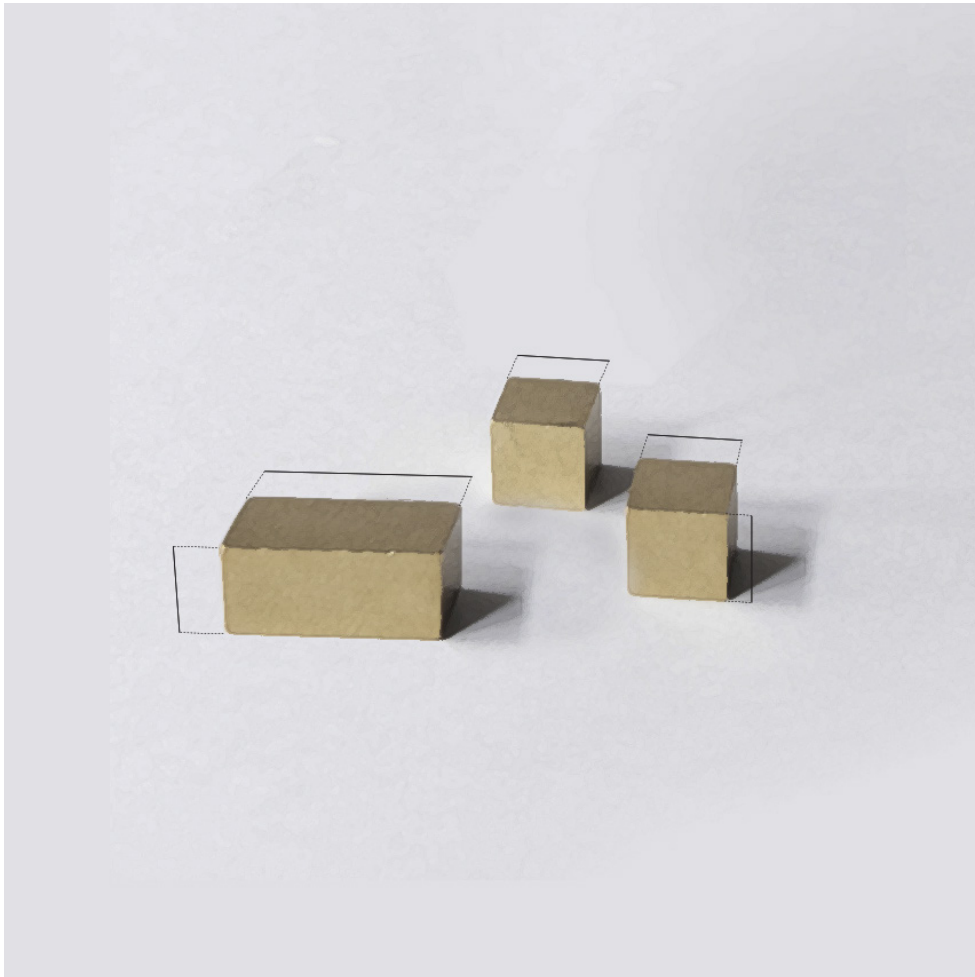
It is also important to understand that the extensive is quantitative. However, since the intensive properties are inherently rooted in matter, they always exist as concurrently quantitative and qualitative<sup>16</sup>. For instance, the wooden mallet relies on not just the density of the wood but also on the measurements of the piece of wood used in its making .

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15. Reiser, Jesse, and Nanako Umemoto. 2006. *Atlas of Novel Tectonics*. New York: Princeton Architectural Press. Page 71.

16. *Ibid.* Page 74.





*Figure 1: Extensive and intensive properties of a brass bar*



### 1.1.3. Geometry

This relationship between the extensive and the intensive properties generates motives and limitations for a materialist engagement of architecture<sup>17</sup>. The extensive properties of an object define a set of limitations. The intensive properties are then manipulated through these limitations. Through an anthropocentric approach towards this relation, one can generate tools out of an object. In other words, the creative possibilities within the matter field allows for harnessing intensive variability.<sup>18</sup> This human-centric approach to this relationship is the starting point of functionalism:

*Functionalist theories of architecture are those which make strict adaptation of form to purpose the basic guiding principle of design and the principal yardstick by which to measure the excellence or the beauty of architecture.*<sup>19</sup>

The notion of geometry is vital within these relations as the extensive properties operate based on scalar geometry of precise units (fig. 3) while the intensive properties are understood as a gradient field of trans-scalar and flexible geometry (fig. 2). The geometry derived from the intensive trans-scalar field is generative in comparison with scalar extensive objects. Hence the extensive geometry is used to capture the intensive geometry as a way of creating a codified system of templates as well as creating the repeatability of the intensive properties (function).<sup>20</sup> However, this approach towards the repeatability and reproduction of the intensive can turn into fixation and stop the further investigation of the extensive and intensive relations.

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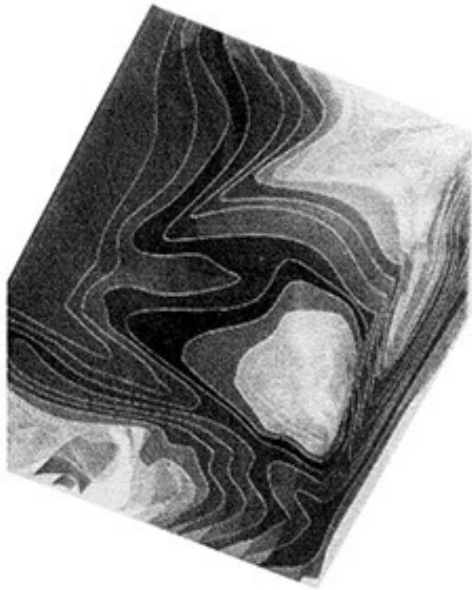
17. Reiser, Jesse, and Nanako Umemoto. 2006. *Atlas of Novel Tectonics*. New York: Princeton Architectural Press. Page 78.

18. *Ibid.* Page 80.

19. De Zurko, Edward Robert. 1958. *Origins of Functionalist Theory*. New York: Columbia University. Page 4.

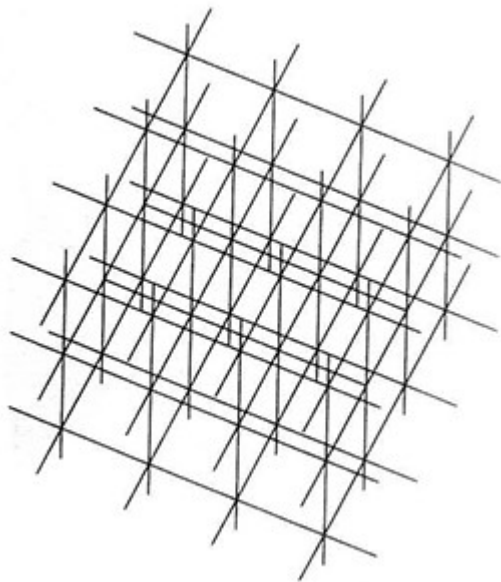
20. Reiser, Jesse, and Nanako Umemoto. 2006. *Atlas of Novel Tectonics*. New York: Princeton Architectural Press. Page 80.





Energy  
Intensive  
Function  
Trans-scalar (gradient)

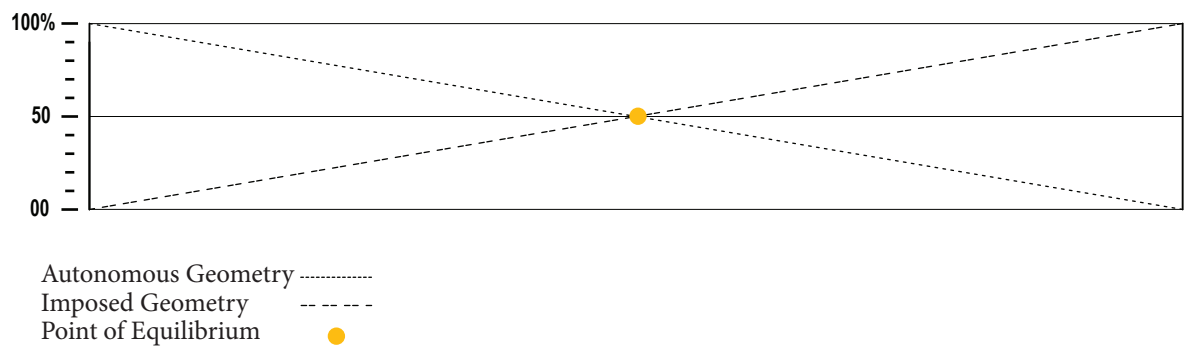
*Figure 2: Intensive Difference:  
Gradient Field*



Matter  
Extensive  
Form  
Scalar

*Figure 3: Extensive Difference:  
Scalar system*





*Figure 4: Autonomous Geometry and Imposed Geometry*



*Figure 5: Wooden Mallet, John Morfis, 2015*



## CHAPTER 2



## 2.1. Limits of Form and Function

The established, two-part division of the architectural object into the notions of form and function and the goal-driven nature of humans and their obsession with optimization has resulted in the emergence of two opposing approaches towards designing the architectural object: functionalism and formalism.

### 2.1.1. Functionalism

Functionalism within the field of architecture is mostly associated with modern architecture due to the use of maxims such as “form ever follows function”<sup>21</sup> or “a house is a machine for living”<sup>22</sup> and the introduction of the use the two terms of “form” and “function” instead of the Vitruvian triad. However, this association is by no means an entirely modern conception. The concept of the architectural object designed exclusively based on its practical use or purpose can be traced to various parts of the history of architecture, for instance, the military architecture of the defensive castles of medieval times. The concept of function as understood from the evolutionary point when humans used tools for the first time, one can assume that the notion of functionalism is indeed associated with the anthropocentric worldview.

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21. Sullivan, Louis Henry . 1896. “The Tall Office Building Artistically Considered.” Lippincott’s, March 23: 403-408.

22. Jeanneret, Charles Édouard . 1985. Towards a New Architecture. New York: Dover Publications. Page 107.





Figure 6: Interior perspective of a primitive hut with internal pillars & side aisles, John Soan.

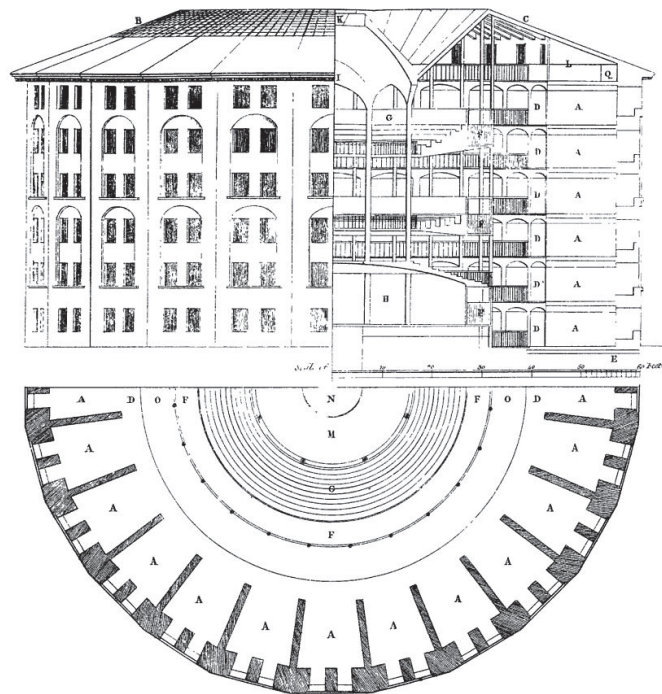


Figure 7: Plan of Jeremy Bentham's panopticon prison, Willey Reveley, 1791.



### 2.1.1.2.Functionalism and Rationalized Functionalism

From the 18th century, there have been two dominant variations of applications of this human-centric approach to the notion of function as a means of rationalising the production of architecture.<sup>23</sup> The first was a rationalisation of architecture through its natural origins. This attitude towards architecture is known as rationalist functionalism.<sup>24</sup> In his “*Essay on Architecture*,” Laugier traced the origin of architecture back to the primitive conditions imitated from nature and therefore demanded that the architectural element and orders be used according to their original purpose.<sup>25</sup> The second variation of functionalism is more associated with modernism, which emerged as a result of the industrial revolution, and which adapted architecture to the world of machine production. Laugier’s “primitive hut” (fig. 6) and Bentham’s “panopticon” (fig. 7) stand as an architectural analogue for these variations of functionalism.<sup>26</sup> However, what was detrimental in functionalism was the obsessive belief in rational science and technological production as the most significant mode of development for reaching the absolute answer to the point that architecture lost its autonomy in attempting to conform to these sets of relations.<sup>27</sup>

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23. Vidler, Anthony. 1998. “The Third Typology.” In *Architecture Theory since 1968*, by Kenneth Michael Hays, 288-294. Cambridge,Massachusetts: The MIT Press.

24. De Zurko, Edward Robert. 1958. *Origins of Functionalist Theory*. New York: Columbia University. Page 150.

25. Ibid. Page 158.

26. Vidler, Anthony. 1998. “The Third Typology.” In *Architecture Theory since 1968*, by Kenneth Michael Hays, 288-294. Cambridge,Massachusetts: The MIT Press.

27.Ibid. Page 288-294.



### 2.1.1.2. Post-Functionalism and Formalism

The demolition of the Pruitt Igoe housing blocks became the historic symbol of the end of modernism. This was the threshold towards a new era of “Postmodernism.” The tone of this transition was in the form of relief from the dogmatic austerity of modern architecture, particularly the international style movement as one of the derivatives of the functionalist movement. The change to the postmodernist approach was a rejection of the dogma of modernism in architecture as a tool composed through confirmation and adaptation of different fields of study.<sup>28</sup> The reaction to the functionalism of the modernist era came in two primary responses.

In the first response, assuming that modernist architecture followed an archaic mode of functionalism, the opponents declared that architecture has its own value and should be judged apart from any functions which it might serve. In other words, they believed in architecture as autonomous or as a pure discipline.<sup>29</sup> In the second response, building on the notion of the failure of modernism, they assumed that modernism did not achieve functionalism due to falling into an obsessional formalism. In a peculiar response, they then declared that the future lies in the past, which gave way to a revivalist approach to function that characterised the nineteenth-century use of historical styles.<sup>30</sup>

The transition from modernism to postmodernism was a difficult one. The telos of function was broken; as a result, many variations of the latter approach towards architecture resulted in formalism or, as one might

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28. Vidler, Anthony. 1998. “The Third Typology.” In *Architecture Theory since 1968*, by Kenneth Michael Hays, 288-294. Cambridge, Massachusetts: The MIT Press.

29. Eisenman, Peter. 1998. “Post-Functionalism.” In *Architecture Theory since 1968*, by Hays Michael Kenneth, 235-239. Cambridge, Massachusetts: The MIT Press;

30. Ibid. Page 235-239.



call it, in the function-follows-form attitude. This formalist approach in turn fell back into the same infatuation with telos, yet this time with form, rather than function, as the centre of architectural worldview. In manifesting this worldview, the formalists frequently incorporated historic architectural elements and ornaments into their work. However, the former branch approached its departing point from the modernist approach through negating the notion of functionality as a deriving factor of the design of the architectural object. This negation was itself the result of breaking away from an idealist perspective of “humanist” notions of form and function as the objective answers to the realist notion of subjectivity in architecture.

### **2.1.2.Object-Oriented Ontology**

The transition from modernism to postmodernism in architecture is contemporaneous with the transition of the idealist to realist approach of aesthetics in philosophy. The current area of philosophy making an impact on recent architectural theory is known as Speculative Realism, in particular, a branch known as ‘triple O’, Object-Oriented Ontology. OOO is a school of thought influenced by Heidegger and Ortega y Gasset which negates the notion of anthropocentrism for a flat ontological model. The shift from Heidegger to Ortega y Gasset shifts OOO towards a more explicit engagement with aesthetics, and architecture. OOO initially engaged with the Heideggerian notion of tool analysis. The approach taken towards the tool is that a tool is concealed to us when it is ready-to-hand; in other words, the tool in use will be withdrawn from our attention. In contrast, the tool will be revealed to us when the tool breaks and stops working (fig. 8).<sup>31</sup> For example, the physical shape of a hammer is withdrawn from the user

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31. Harman, Graham.2002. Tool-Being: Heidegger and the Metaphysics of Objects. Chicago: Carus Publishing Company. Page 67.





*Figure 8: Broken Wrench, Kavosh Maleki.*



while being used for driving a nail into a wall, but will be revealed when the hammer breaks at the moment of impact. The similarity of this approach with the notion of “form follows function”<sup>32</sup> is evident. If the architectural object is a tool (like a ‘machine for living in,’) then the architectural object’s physical form is always invisible and withdrawn from its occupant as long as it functions, and it will become visible when it does not function. At this point form will dominate over the functional reading.

The philosophy of OOO also gives autonomy to objects by cutting the ties with the idealist point of view that objects are just what we perceive them to be (correlationism); in other words, an object is prior to its relations.<sup>33</sup>

### **2.1.2.1. Undermining, Overmining, and Duomining**

OOO explains that our understanding of an object always comes through two processes, which are mostly applied concurrently. First, the object is explained through its smaller constituents, by way of a downward reduction, down to atoms in the case of physical things; this method is called undermining.<sup>34</sup> The second method is the opposite of the first, in that it explains the object by connecting it to a greater network of relations to other things and its effects; this second method is deemed overmining. Finally, there is a third method that combines both methods and is known as duomining.<sup>35</sup>

One can draw a parallel between a flat ontology and this negation of undermining, overmining and duomining within OOO with the negation of the two notions of formalism (function follows form) and functionalism

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32. Sullivan, Louis Henry . 1896. “The Tall Office Building Artistically Considered.” Lippincott’s, March 23: 403-408.

33. Morton, Timothy. 2012. “An Object-Oriented Defense of Poetry.” *New Literary History* 205-224.

34. Harman, Graham. 2016. *Immaterialism*. Cambridge,: Polity Press. Page 7-11.

35. *Ibid.* Page 7-11.



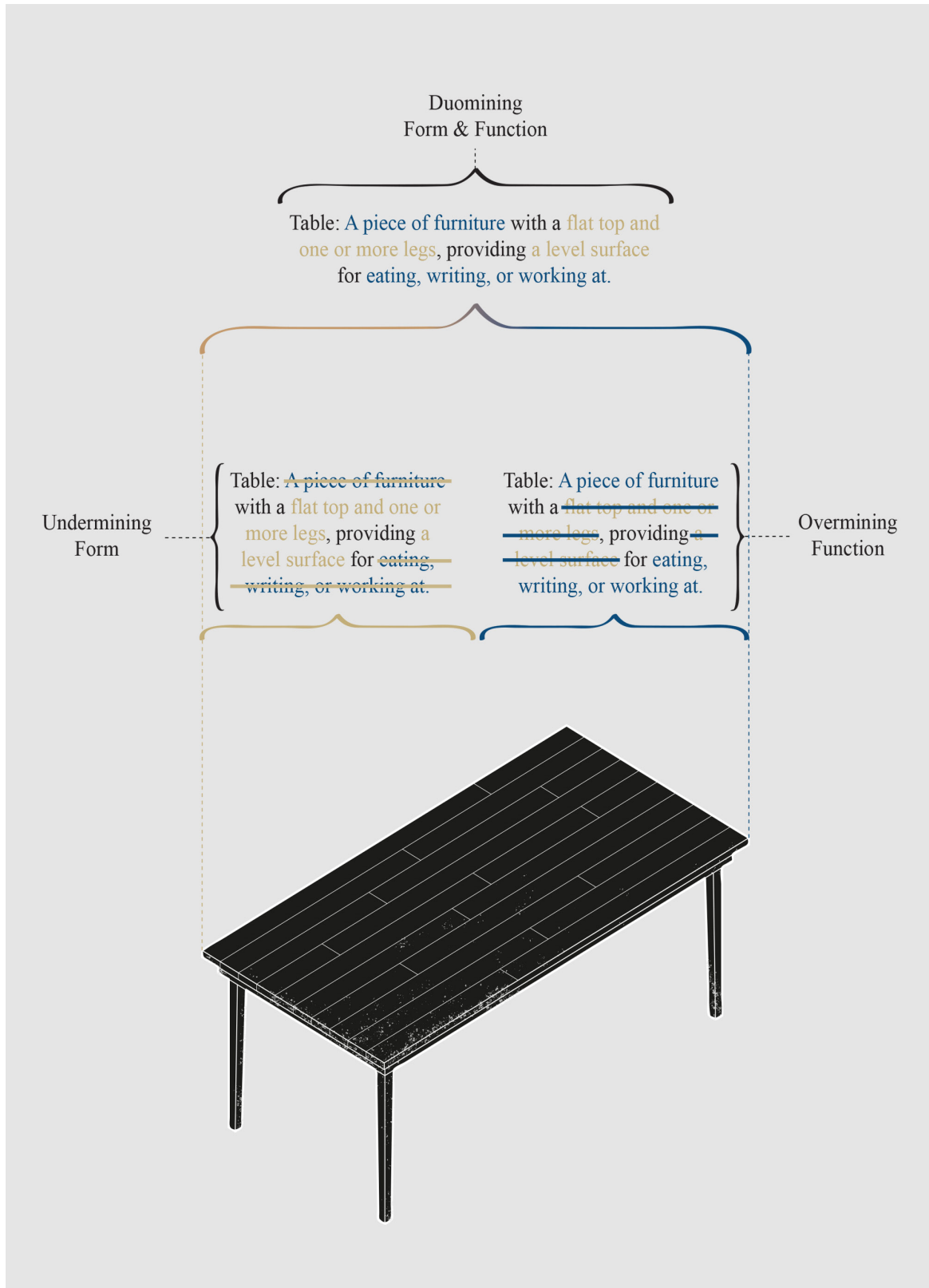


Figure 9: Undermining, Overmining, Duominging,  
Kavosh Maleki.



(form follows function)<sup>36</sup> . For instance, an object like a table could be described as “a piece of furniture with a flat top and one or more legs, providing a level surface for eating, writing, or working”<sup>37</sup>. By looking at this description the function of the table is explained through overmining of the table to larger relations, such as being level, eating, or writing, while its form is explained by breaking it into parts, such as one or more legs and the flat top, which is undermining—hence resulting in a duomining of the table for its complete description (fig. 9).

This loss of a teleological goal or loss of hierarchy within the design based on pure function or pure form leaves a great hole, leading to a nihilistic worldview.

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36. Sullivan, Louis Henry . 1896. “The Tall Office Building Artistically Considered.” Lippincott’s, March 23: 403-408.

37. Oxford Dictionaries, s.v. “table,” accessed June 8, 2019



## **2.2.The Disintegration of the Perfect House**

Throughout the history of architecture, there have been many attempts to reach perfection in architecture through the making of architectural objects and carefully analysing and studying the architectural object as a means for creating objective knowledge. This analysis of the architectural object usually involves the reduction of the architectural object to its parts as a means of explaining the whole object (undermining), overmining the architectural object by comparing its tangible properties to bigger ideas, or a combination of both methods known as duomining.<sup>38</sup> All these attempts can be organized into four categories: geometric, platonic, off-the-shelf, and the primitive hut.

### **2.2.1. The Perfect Geometry**

The form and materiality of an architectural object is one of the initial points of relation between geometry and architecture; making geometric compositions based on different ratios is one of the primary methods of duomining implemented within the composition of the architectural

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38. Harman, Graham. 2016. *Immaterialism*. Cambridge,: Polity Press. Page 7-11.



objects. One of the most prominent examples of this relation can be the implementation of human body ratio in the architectural objects throughout classical ancient Greek and Renaissance periods in architecture. This notion of the use of geometric ratios can be traced back to the writings of Vitruvius in *De Architectura*. In Book III, he expands on the characteristics of the perfect building, deeming it to be symmetrical and drawing upon the geometrical proportions of the human body:<sup>39</sup>

*Therefore, since nature has designed the human body so that its members are duly proportioned to the frame as a whole, it appears that the ancients had good reason for their rule, that in perfect buildings the different members must be in exact symmetrical relations to the whole general scheme. Hence, while transmitting to us the proper arrangements for buildings of all kinds, they were particularly careful to do so in case of temples of gods, buildings in which merits and faults usually last forever.*<sup>40</sup>

This humanist concept of a correlation between geometric proportions of an “ideal” human body and an architectural object was an attempt aimed towards the making of a perfect architectural object. This Greco-roman idea was used throughout the Renaissance up to the modernist era. It is evident through the similarity between the subject of “The Vitruvian Man” by Leonardo Da Vinci (fig. 10) based on Book III of *De Architectura* and “The Modulor Man” by Le Corbusier (fig. 11), as both illustrate the ratios of human body. The incorporation of ratios extracted out of the Fibonacci mathematical series within the process of composing the architectural object is seen as one of the methods of achieving geometric harmony and order to which every “perfect” architectural object should aspire. However, this “perfect” anthropocentric approach towards architecture cannot be anything more than a substantially composed construct, derived from one of the many ratios visible in nature. This is evident through the comparison of the western “geometric ratio” to its well-known eastern equivalent geometries

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39. Morgan, Morris Hicky. 1914. *Vitruvius The Ten Books on Architecture*. Cambridge: Harvard University Press. Page 73.

40. *Ibid.* Page 73.



i.e., “proportioning system.” Within ancient Japan, similarly to the western humanist tradition of using the golden ratio (1:1.618~), the Japanese used a 1:2 ratio as means of measuring tatami mats in order to plan traditional Japanese houses (fig. 12). This plurality of geometric proportions used as a driving concept in the architectural composition of an object contradicts the singular notion of the perfect, since each of the geometric proportions provide two completely different answers to the same question. Therefore, one can assume that there is no absolute single perfect geometrical answer to achieving perfection. Hence, it is evident that the doubled approach of linking the human body’s geometric proportions to the proportions of the “perfect” temple (a ‘top-bottom’ approach) as well as composing the details of the architectural object based of human body’s proportion (a ‘bottom-up’ approach) aimed towards creating perfect architecture is problematic in the context of creating architectural knowledge.

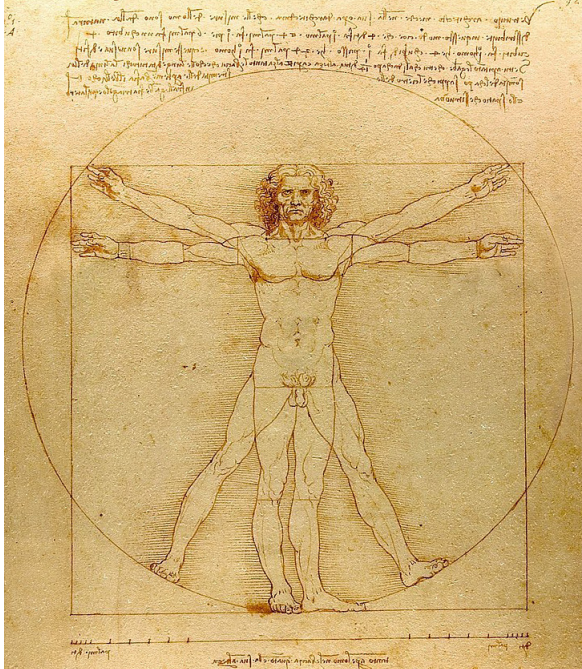


Figure 10: Vitruvian Man, Leonardo da Vinci, 1490.

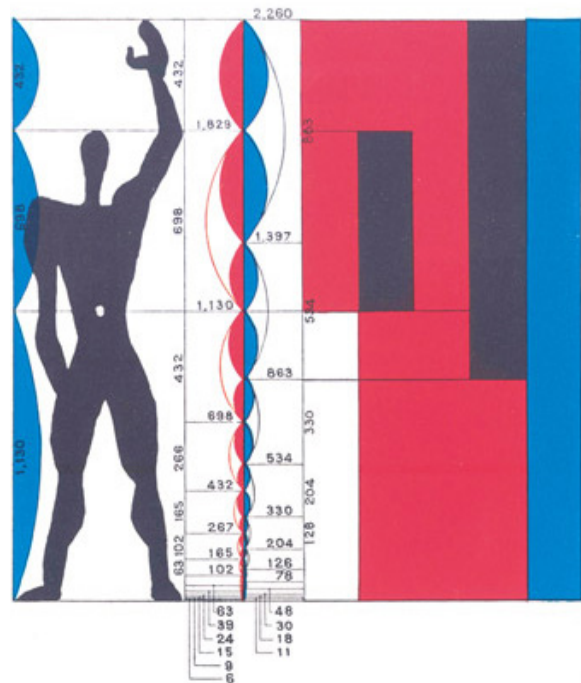


Figure 11: Modulor, Le Corbusier, 1948.



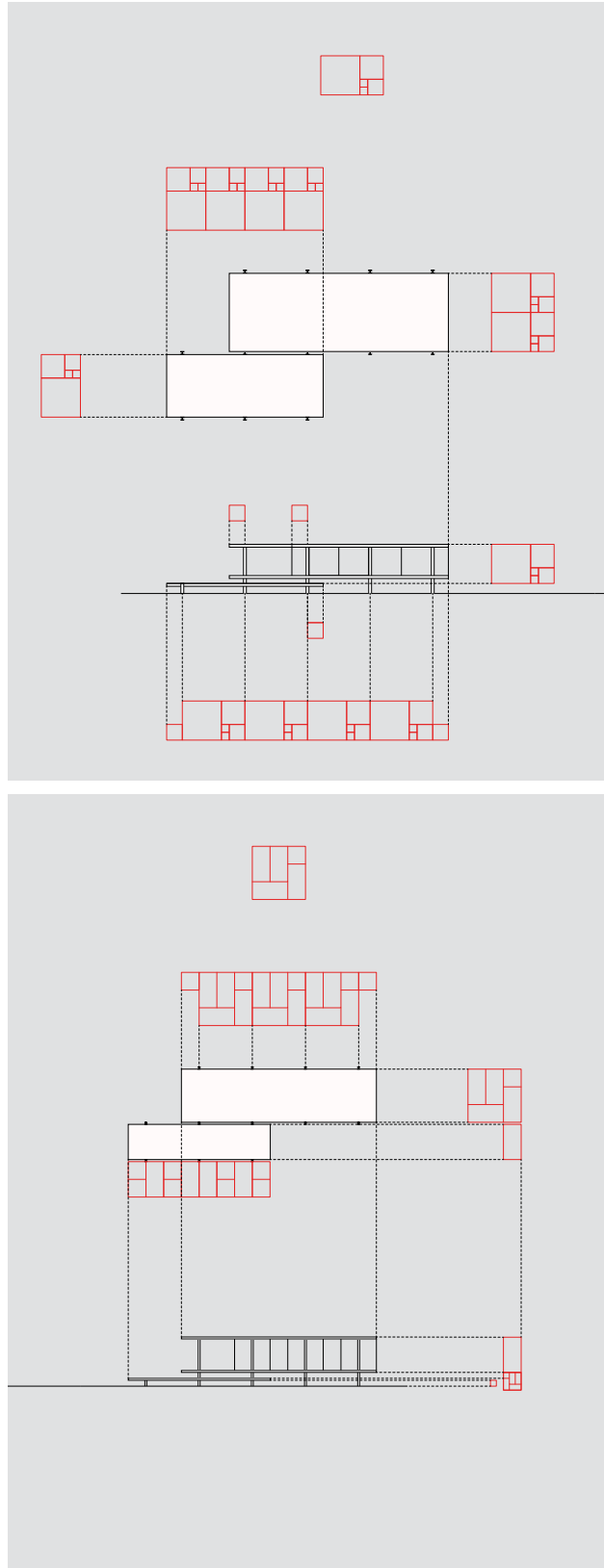


Figure 12: Farnsworth House Using Two Different Geometric Ratios



### 2.2.2. Platonic Perfection

It is impossible to expand upon the idea of perfection and not to mention Plato's idealism and theory of forms. As explained in his work *The Republic*, Plato maintains that non-physical ideas present a perfect reality and that the objects seen in the world are not ideal, but an imitation of the non-physical, real forms (ideas). This viewpoint was expressed in the Allegory of the Cave (fig. 13) in Book VII and VIII of *The Republic*.<sup>41</sup> The story envisions a group of prisoners that are chained in a cave their whole life, staring at a blank wall as they watch the shadows projected on the wall from objects which they cannot directly see placed in front of a fire behind them. The prisoners give names to the shadows because, even though they misidentify the objects that cast the shadows, for the prisoners, the shadows are reality. Through this story, Plato claims that we, as humans, are prisoners within this physical world and that the objects with which we interact or create are imperfect shadows of the perfect form (idea) that is in the mind.<sup>42</sup> Plato argues that anything made in the physical world (Phenomena) is a mere imitation of the real idea within the mind (Noumena). This notion is further demonstrated in the story of three beds in Book X of *The Republic*. Take three beds. Plato states: the first is the perfect, non-physical bed, existing in the mind; the second is the bed made by a carpenter, which is the imitation of the perfect bed in the mind; and the third is an artist's painting of the bed, imitating the carpenter's physical bed. Plato explains that the third bed is two times removed from the idea of the bed. Even though the painter draws the carpenter's bed, he knows nothing of the knowledge (techne) of making the bed.<sup>43</sup> Therefore, it is given that in the case of an architectural object,

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41. Plato. 2007. *The Republic*. London: Penguin Publishing Group. Page 373-430.

42. Ibid. Book VII&VIII. Page 373-430.

43. Ibid. Book X. Page 457.



the object can never be perfect, as the architectural drawing would be an imperfect imitation of the architectural idea, and thus the resultant, built architectural object is two times removed from the architectural idea by way of being an imitation of the architectural drawing.

The notion of the existence of perfect forms, however, can be undermined. If the drawing of a circle is never a perfect circle, even though it is drawn with the highest degree of precision possible, then one can conclude that no one can ever know the real idea of the circle. If so, the notion of the circularity of an object wouldn't be universally understood. In other words, Plato's real (forms) ideas are nothing but a conceptual average (fig. 14) of the imperfect things seen in nature, meaning that the idea of the circle results from the average taken from the circular pattern of numerous objects seen in nature. Therefore, it is possible to state that neither one of Plato's three beds is perfect or superior to the other.





Figure 13: Plato's Allegory of the Cave, Jan Saenredam, 1604.

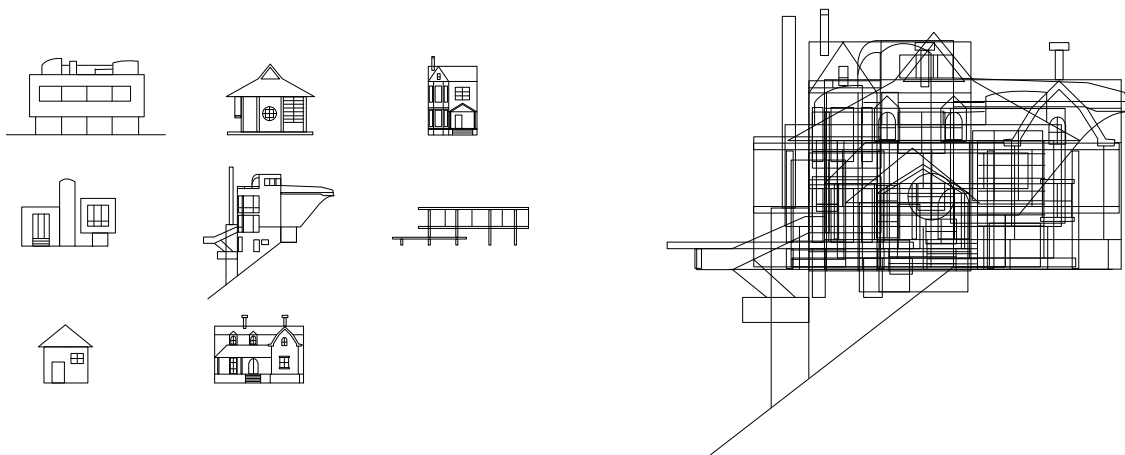


Figure 14: Perfect House-Average Taken From Many Houses, Kavosh Maleki



### 2.2.3. Off-the-Shelf Perfection

*Modernization had a rational program: to share the blessing of science, universally. Junkspace is its apotheosis, or meltdown ... Although its individual parts are the outcome of brilliant inventions, lucidly planned by human intelligence, boosted by infinite computation, their sum spells the end of enlightenment, its resurrection as farce, a low-grade purgatory... Junkspace is the sum total of our current achievement;<sup>44</sup>*

With the advancement of technology and the notion of optimisation and mass production, there is an abundance of ready-to-buy, off-the-shelf, architectural products which are designed and optimised for the highest functional efficiency: windows designed with multi-glass panes, filled with argon gas to increase their thermal insulation capacity; wooden wall studs, cut into standard dimensions; sheets of plywood with alternating grain laminations to increase the strength of the panels; and dense foams with high thermal insulation values. All of the individual parts are designed to be put together into a whole, giving the consumer the perfect house, all assuming that the high performance and efficient parts can bring about an architectural object that can reach the perfect performance levels of its parts, out of which it is built (fig. 15).

One can assume this point of view was a modernist approach towards architecture. Like ocean liners, airplanes and automobiles, all machines and tools are made out of parts that work efficiently to make the whole to work (almost) perfectly.

*A house is a machine for living in. Baths, sun, hotwater, coldwater, warmth at will, conservation of food, hygiene, beauty in the sense of good proportion. An armchair is a machine for sitting in and so on.<sup>45</sup>*

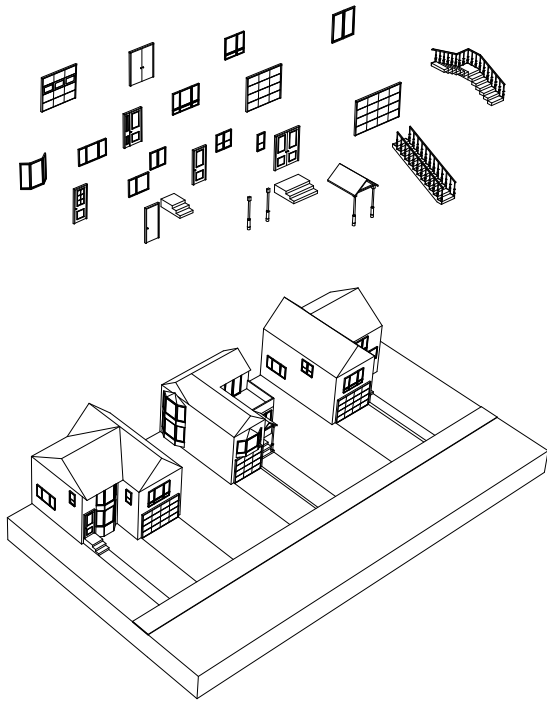
This conceptualization of the relationship of parts to the whole is flawed however, because a machine (whole object) composed of many parts (individually highly efficient), will not necessarily produce in a machine (object) as a whole the same efficiency level of its parts. In other words, the

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44. Koolhaas, Rem. 2002. "Junkspace." The MIT Press Journals 175-190.

45. Jeanneret, Charles Édouard . 1985. Towards a New Architecture. New York: Dover Publications. Page 95.





*Figure 15: Off-the-Shelf Perfection, Kavosh Maleki.*



*Figure 16: Aerial View Above Residential Neighborhood Sunset District San Francisco California, 2008*



whole is not a sum of parts. This is due to the immense amount of possible variations based on the number of parts used within a machine. The variables become extremely more complex in the case of a complicated architectural object, as its relations are not merely constricted to its parts as an object, but it acts as an object within a larger hyper-object or ecology — for instance, the relation of an architectural object to the topography of earth, climate, and socio-political influences. Consequently, based on the amount of variables and relations within the composition of the architectural object, one can assume that there is a possibility of multiple resultant configurations and interpretations. Moreover, due to the notion of the singularity of perfection, one can conclude it is not possible to compose a perfect architectural object but only imperfect ones (fig. 16).

#### **2.2.4. The Primitive Hut**

The idea of the primitive hut within architectural theory has been deployed by many architectural scholars as a means of justification of objective (perfect) truth and laws through understanding the origin of architecture. These attempts of the use of the primitive hut within architectural theory can be divided into three key types that correlate with the three kinds of perfection (geometric, platonic, and off-the-shelf).

##### **2.2.4.1. Marc-Antoine Laugier**

Within his work, *An Essay on Architecture*, Marc-Antoine Laugier explained the origin of architecture by glorifying ancient Greek civilization as the epitome of perfection in art and architecture. He relates the Greek temple to the story of a primitive man that seeks shelter and builds one by





Figure 17: Frontispiece of Marc-Antoine Laugier: *Essai sur l'architecture*, Allegorical engraving of the Vitruvian primitive hut., Charles Eisen, 1775.



imitating from nature. The shelter is composed of three primary elements: the column, the entablature, and the pediment (fig. 17).<sup>46</sup> These three architectural elements become the basis of his argument that perfect architecture comes from nature, and that any extra elements added to these three elements, such as an attic, window, arch, vault and even a door are superfluous and are caused by the faulty influence of “The Barbaric Interruptions”<sup>47</sup> of the perfect Greco-Roman culture. The point of view that the perfect architecture is comprised of architectural elements imitating nature is very similar to Vitruvius’s argument in *De Architectura* regarding the relation of the proportion of the human body to the proportions used in the construction of temples as a method to making a perfect architectural object.<sup>48</sup> This is because both arguments rely on the bigger concept of nature or human proportions to justify the use of these concepts in the making of architectural elements and their proportions.

The method of Laugier, at the same time, is mirrored to the Vitruvian geometrical method in a way that Vitruvius uses the greater concept of the golden ratio as a ruling guideline for the making of the perfect architectural object, a sort of top-down design scheme. However, in the case of Laugier, the perfect elements (the column, the entablature, and the pediment) are derived from nature that comes together to compose the perfect (primitive) hut, which is a sort of bottom-up approach towards reaching the perfect architectural object. However, this bottom-up approach towards reaching the perfect architectural object fails similarly to the off-the-shelf perfection, because a machine that is created with optimized (perfected) parts does not transfer directly to a the machine made out of parts that are perfect, and vice versa.

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46. Laugier, Marc Antoine. 1977. *An Essay on Architecture*. Los Angeles: Hennessey & Ingalls. Page 13.

47. Ibid. Page 13.

48. Morgan, Morris Hicky. 1914. *Vitruvius The Ten Books on Architecture*. Cambridge: Harvard University Press. Page 72.



## 2.2.4.2. Gottfried Semper

The idea of the reduction of the analogue architectural object (primitive hut) into elements did not end at Laugier's three elements derived from nature in "the rustic primitive hut".<sup>49</sup> Gottfried Semper in his work *Four Elements of Architecture*, through observing "barbarians," assumes that "architecture is made out of four elements of hearth, roof, enclosure, and mound".<sup>50</sup> This assumption was made aiming towards finding a universally objective theory for architecture by proving that all primitive structures have used the same architectural elements (fig. 18).

Similar to Laugier's reasoning in his argument, Semper assumed that the perfect architectural object was created at the genesis of architecture by "barbarians." This belief in a sort of genesis in the human dwelling as the first architectural object to appear in one great accident, rather than the result of a prolonged evolution through the accumulation of a multitude of attempts and accidents, is a similar sort of approach used in the first sequence of Stanley Kubrick's *2001: A Space Odyssey*. In the first sequence, "The Dawn of Man,"<sup>51</sup> the monolith (fig. 19) suddenly changes the apes into tool-using animals. Or similar to Plato's story of three beds in *The Republic*<sup>52</sup>, which assumes that the essence of the bed was suddenly in the mind disregarding the notion that the idea of the bed is known through averaging the experiences of bed-like objects.

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49. Laugier, Marc Antoine. 1977. *An Essay on Architecture*. Los Angeles: Hennessey & Ingalls. Page 13.

50. Semper, Gottfried. 2011. *The Four Elements of Architecture and Other Writings*. Cambridge : Cambridge University Press. Page 102.

51. 1968. *2001: A Space Odyssey*. Directed by Stanley Kubrick.

52. Plato. 2007. *The Republic*. London: Penguin Publishing Group. Book X. Page 457.



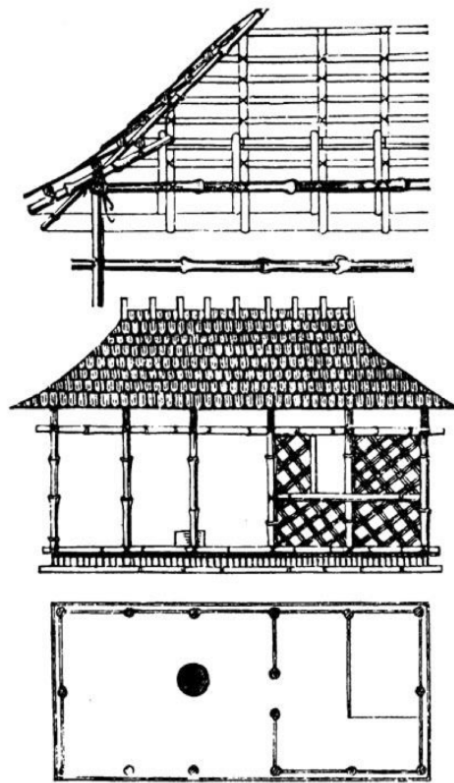


Figure 18: Gottfried Semper. *Primitive Hut*. 1851.

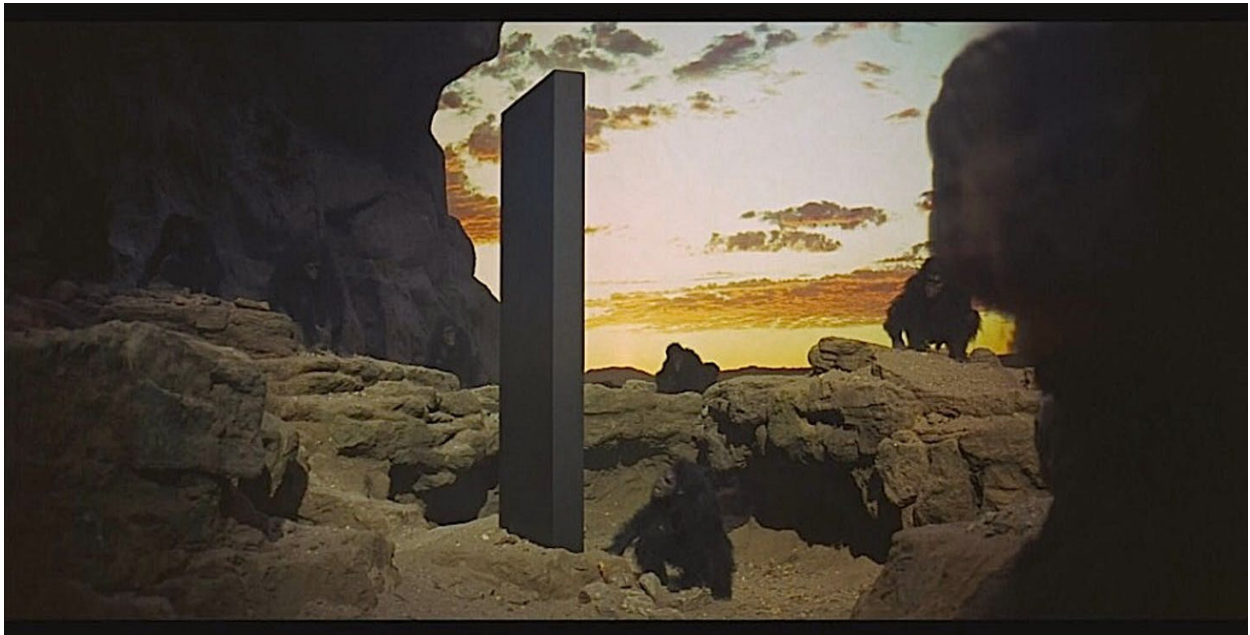


Figure 19: *Monolith, 2001 a space odyssey*, 1968.



### 2.2.4.3. Le Corbusier

Likewise to Laugier and Semper, the reduction of the architectural object into parts is also present in the works of Le Corbusier within the era of modernism. However, Le Corbusier does not validate his conceptualization of perfection in architecture on its origins in the primitive but instead, he replaces traditions of the past with a new modernist tradition. In other words, he composes his own primitive hut of modernism – the Dom-Ino House (fig. 20) and later on Villa Savoye (fig. 21), all of which rely on the similar functionalist perspective explained in his book *Towards a New Architecture*<sup>53</sup>, simply attempting to create a genesis for a new perfect architectural object by studying the traditions of the past past and incorporating historical elements as pure geometric shapes. Within his modernist architecture manifesto “*The Five Points of a New Architecture*,”<sup>54</sup> he similarly to his predecessors (Laugier and Semper) introduces five points (elements) which are to be used in the creation of perfect architectural objects:

**Pilotis:** *a grid of reinforced concrete columns instead of loadbearing walls;*

**Unobscured floor plan:** *by using the grid column system the obstruction within the floor plan was minimized;*

**Free design of the façade:** *by separating the exterior walls of the building from their previous structural function through the use of the grid column system;*

**Horizontal windows:** *for maximizing natural light through the use of nonstructural exterior façades;*

**Roof gardens:** *the vegetation on the flat roof can serve as protection for the exposed concrete surface.*

However, it is established that this sudden mutation is an accumulation of many small changes through many generations, meaning that this sudden so-called renaissance in architecture using these five guidelines is just a part of the trail of the evolution of architecture.

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53. Jeanneret, Charles Édouard . 1985. *Towards a New Architecture*. New York: Dover Publications. Page 95.

54. Ibid. Page 229.



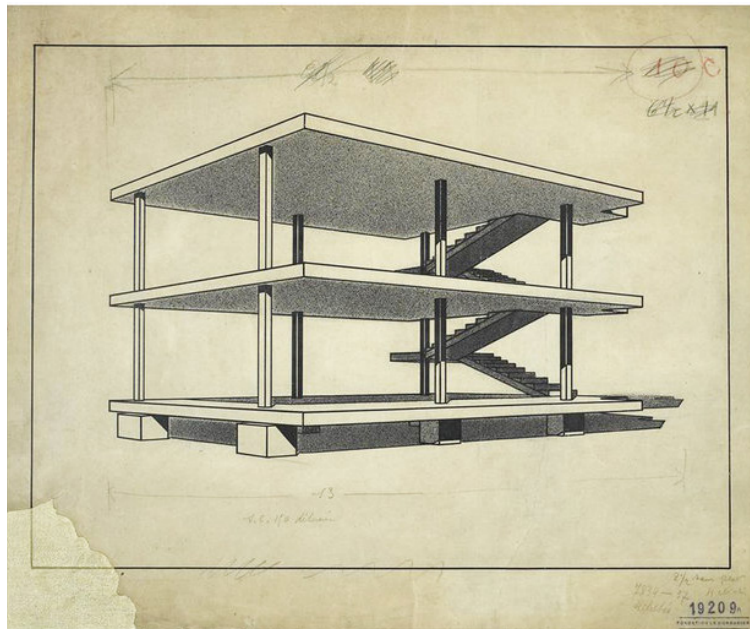


Figure 20: Maison Dom-Ino, Charles-Édouard Jeanneret, 1914.



Figure 21: Villa Savoye LeCorbusier, August Fischer, 2015.



### **2.2.5. Top-Down and Bottom-Up Justification**

One could get to the consensus that all of the above uses of the analogue of a primitive hut within architectural theory are aimed towards making objective laws and principles that could produce a perfect architectural object through a combination of top-down and bottom-up approaches towards design. However, when combined, these top-down, bottom-up design methods are only two perspectives towards understanding an object out of many other points of view that are beyond an anthropocentric perspective, such as the approach of understanding an object through OOO.



### 2.3. Nihilism and Architectural Freedom

With the notion of flat ontology in OOO and the disintegration of teleological goals, one is faced with the absurd.<sup>55</sup> Among the ways this absurd condition manifests itself is the fundamental conflict between what we want to understand from the world and the objects within it as meaning, order, or reasoning. We attempt to understand through the human-world correlate of a withdrawn world that exists beyond our ability to fathom due to our human condition and limited anthropocentric perspective. On top of this difficulty, the perfect functionalist architectural object is impossible to achieve because every object, seen as a function without form, is impossible. Moreover, the same apparently holds true for perfect formalism: no form can exist without function based on an anthropocentric worldview to which we are shackled. If we can only understand objects through undermining, overmining, or duomining, we can never, therefore, know objects as they are, without breaking them down into their constituent parts or defining them through their relations to other objects, or both. Consequently, reaching a final, singular, perfect, and objective answer is impossible; like Sisyphus<sup>56</sup> (fig. 22), we attempt different ways to answer but which bear multiple, imperfect subjective results.

This lack of telos does not negate or end architecture. Rather, the condition of multiplicity provides architecture the freedom to exist autonomously and for it to explore various ideas and concepts. The particular concept explored within this thesis is an investigation of the concept of accident as a way to create imperfect architecture.

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55. Camus, Albert. 2003. *The Myth of Sisyphus*. New York: Vintage Books. Page 3.

56. *Ibid.* Page 119-138.





*Figure 22: Sisyphus, Tiziano Vecelli (Titian), 1548.*





Figure 23: Imperfect Architectural Object, Kavosh Maleki.

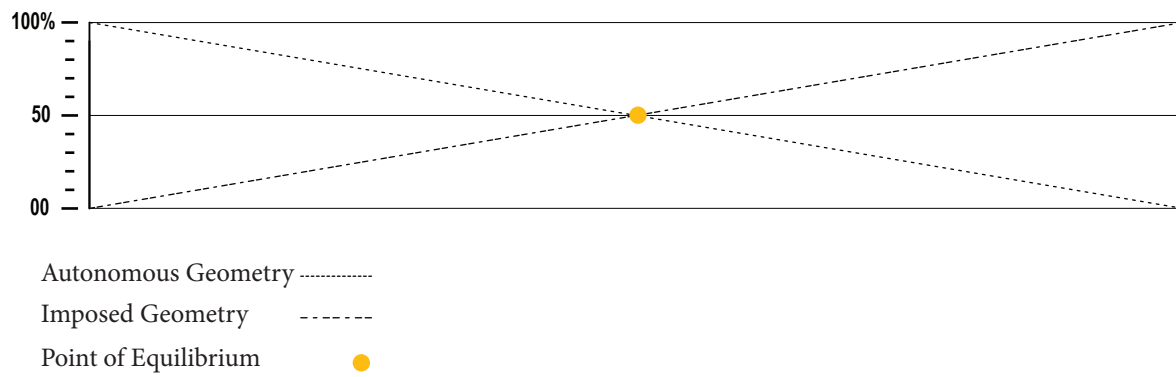


Figure 24: Autonomous Geometry and Imposed Geometry, Andrew Zago, Accidents, back cover

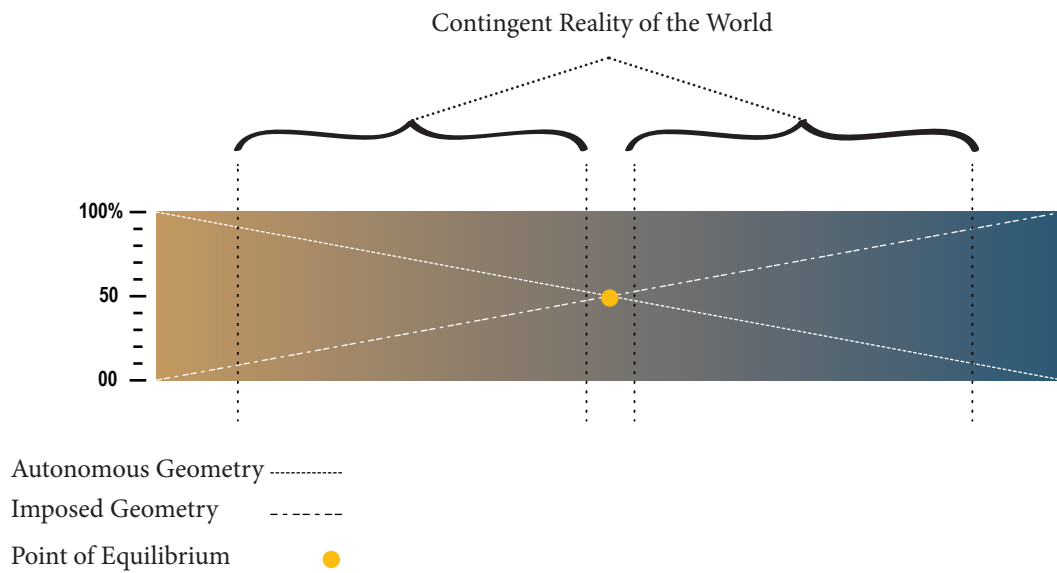


Figure 25: Contingent Reality of the world based on Andrew Zago Accident Diagram, Kavosh Maleki



## CHAPTER 3



## 3.1. Contingency and Accident

### 3.1.1. Diagram

The diagram is a proposition. A contingent diagram allows for the investigation of new knowledge.

*The diagram is an invisible matrix, a set of instructions, that underlies—and most importantly, organizes— the expression of features in any material construct. the diagram is a reservoir of potential that lies at once active and stored within an object or an environment (or in every aggregate or section of these). It determines which features (or affects) are expressed and which are saved. It is, in short, the motor of matter, the modulus that controls what it does.<sup>57</sup>*



Figure 26: Burning of Cotton, Kavosh Maleki.

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57. Reiser, Jesse, and Nanako Umemoto. 2006. *Atlas of Novel Tectonics*. New York: Princeton Architectural Press. page 12-13.



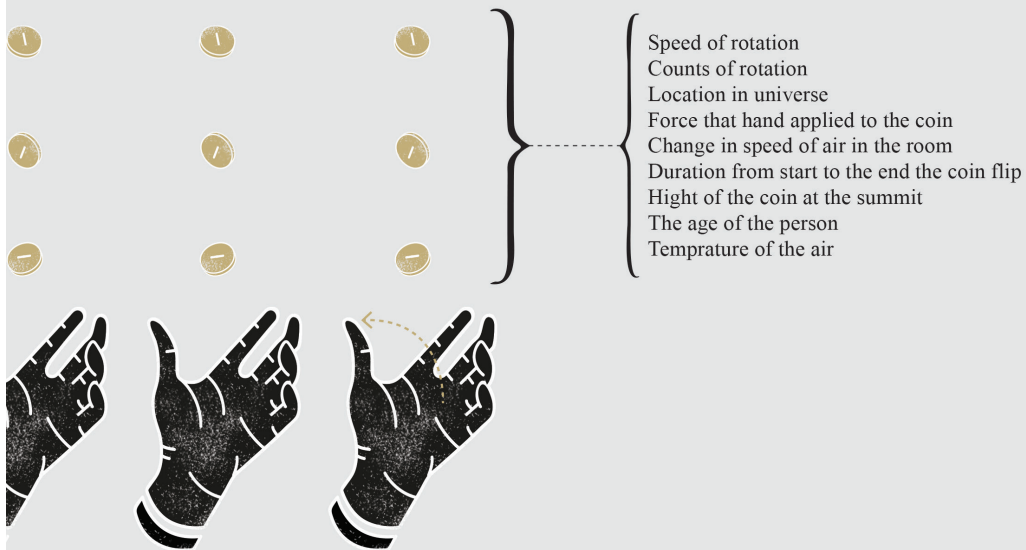
### 3.1.2. Contingency

Under the effect of a nihilistic outcome due to the loss of a pure telos, accidents seem unrelenting. Therefore, to understand the real notion of accident as the derivative of the nihilistic worldview (which is the main root of the idealist perspective towards things as the mere shadows of the ideal forms) one needs to start with contingent propositions within logic.

A contingent proposition is a logical proposition that is neither true under every possible assessment nor false under every possible valuation. For example, the action (proposal/diagram) of flipping a coin (fig. 27) once allows for three possible outcomes (heads, tails, and edge). The contingency of a proposition is reliant on the premises of a lack of absolutes (not knowing the result of the coin flip) which allows for ambiguity and diversity of the results (heads, tails, and edge). In other words, a contingent proposition cannot be true or false in all possible worlds as it would cause that proposition to become a necessary proposition. Also, one cannot be absolute in advance about the result of a coin flip. Through an understanding of the contingent reality of our world due to the lack of absolute certainty one can determine that all architectural objects result from a series of complex contingent propositions. In other words, the architectural object cannot reach any pure absolute final state. An architectural object is neither composed to be purely formalised nor purely functionalized. All architectural objects are composed of matter and energy, form and function, and intensive and extensive properties, but never just one and not the other. Hence, the architectural object is always an imperfect object designed and motivated through its comparison to absolute ideas such as pure form or pure function or a pure state of equilibrium between form and function. Therefore, this relationship between form and function within the architectural object is governed by



Diagram: flipping a coin 3 times.



No man ever steps in the same river twice, for it's not the same river and he's not the same man.

Heraclitus

Figure 27: Coin Flip, Kavosh Maleki



the sets of ruling guidelines based on unachievable absolutes, and it can only lead to many ambiguous and diverse multitude configurations of accidental results within the possible gradient of form and function.

### **3.1.2.1. Accuracy**

This fascination with the impossible idealist perfection and telos-driven architecture (formalism and functionalism) of the anthropocentric tradition resulted in a coping response method in the form of fetishisation of accuracy and precision. Through this method, the architect's responsibility was to minimise the probability of the advent of accidents through the implementation of a high level of precision within the design of the architectural object. In another words, the traditional architectural design method is fighting the contingent nature of the world through increasing accuracy to the point of creating consistently optimized outcomes which pushes the contingent nature of the proposition to a nearly necessary one, yet never being capable of actually achieving the absolute end state (pure form or pure function). This results in a rift between the possible outcome and the perfect; setting a starting point for a continuous cyclic struggle in which the architect—similar to the example of Sisyphus's eternal venture of rolling a boulder uphill—is caught up in. This shortcoming in the venture for reaching perfection was to be blamed on materiality and its limits. The struggle between the obsession with the notion of accuracy, and the blaming of the materiality and its limits can be traced back to the industrial revolution, which replaced inaccurate, natural wood and stone with accurate, manufactured materials such as steel, as a way of reducing these inaccuracies. For instance, the wooden wagons that took their form from the long lineage of carriage designs gave way to steel automobiles; the wooden boats and ships gave way to the great steel ships; and the wooden and canvas framed



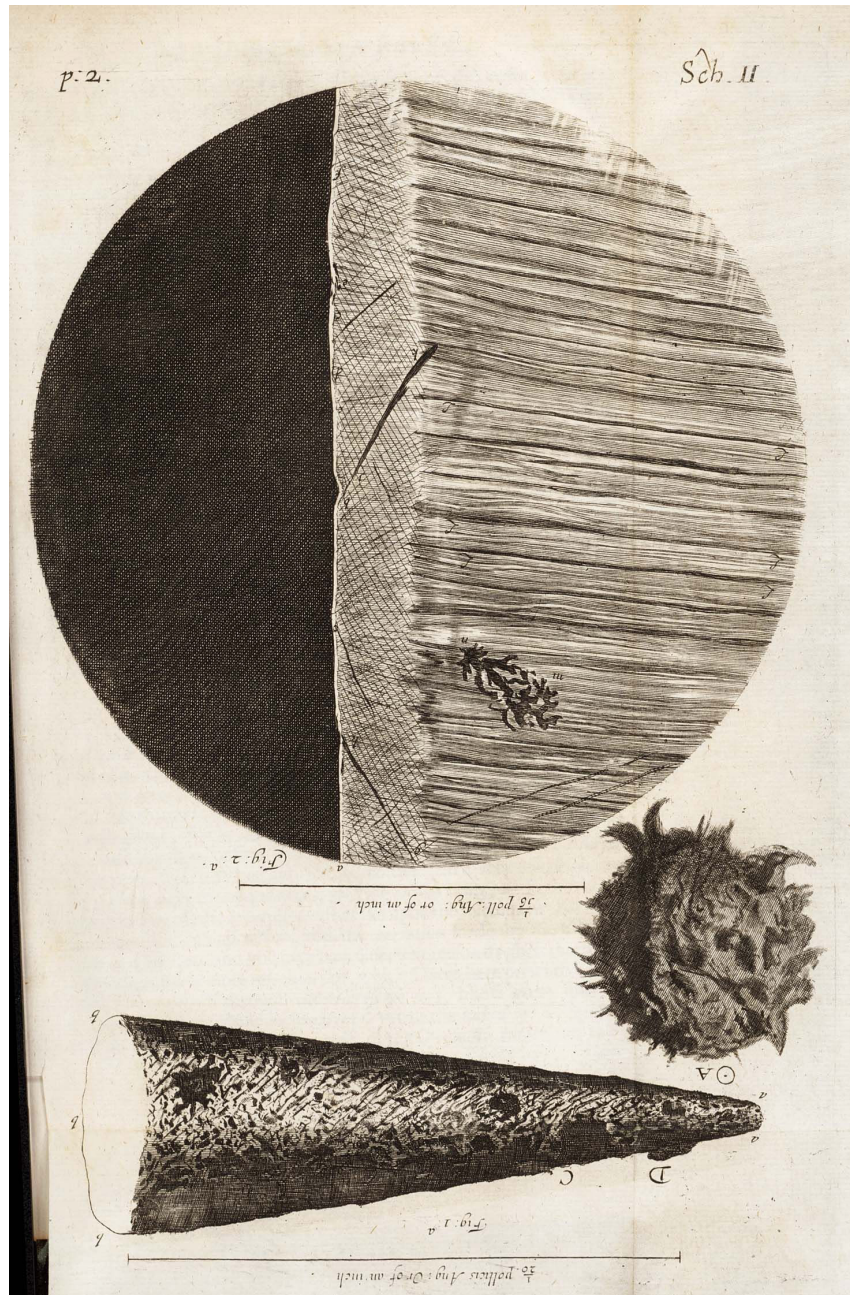


Figure 28: Drawing of a Compass needle and point made with ink under microscope, Robert Hooke, 1665.



airplanes of the Wright brothers transitioned into aluminum frames. It was therefore inevitable that the building as architectural object was next in line to change from natural to manufactured and more precise material. This change towards more accurate material in the field of architecture is visible in one of the most important modernist texts *Towards a New Architecture* through a comparison of the house to the automobile:

*If the problem of dwelling or the flat were studied in the same way that a chassis (automobile) is, a speedy transformation and improvement would be seen in our houses. If houses were constructed by industrial mass-production, like chassis, unexpected but sane and defensible forms would soon appear; and a new aesthetic would be formulated with astonishing precision.*<sup>58</sup>

This obsession with the notion of accuracy and precision within details and selection of materiality based on molecular structure cooperates with the same line of logic which operates on dissection of objects into parts as a way of understanding the object or the notion of undermining within OOO. Therefore, equally, because OOO states that the real object cannot be engaged with (since we can only engage with the sensual object through undermining, overmining, or both methods concurrently), there are limits to this venture in accuracy and precision. Buildings have proven to be quite resistant to technological optimization.

In 1665, Robert Hooke starts his letter to Charles II with the statement “As geometry, the most natural way of beginning is the mathematical point”<sup>59</sup> in order to justify which objects to select for examination under microscope’s magnification. He selected two types of points, first his most precise instrument, his compass needle, and second the period put at the end of a sentence on a piece of paper (fig. 28). However, as he placed the needle’s tip under the microscope, he was faced with the dizzying reality of the inaccuracy of his most accurate instrument (needle). He describes the image as follows:

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58. Jeanneret, Charles Édouard . 1985. *Towards a New Architecture*. New York: Dover Publications. Page 133.

59. Hughes, Francesca. 2014. *The Architecture of Error, Matter, Measure, and the Misadventures of Precision*. London, England: The MIT Press. Page 17.



*A broad, blunt, and very irregular end; not resembling a cone, as imagin'd, but onely a piece of tapering body, with a great part of the top removed or deficient ... big enough to have afforded a hundred armed mites room enough to be rang'd by each other without endangering the breaking one another's neck, by being thrust off on either side. ... All the rest of that roughen surface, were only so many marks of the rudeness and bungling of art.*<sup>60</sup>

If this example of the inaccuracy of Hooke's needle demonstrates the limits of accuracy in manufacturing capabilities, which is observable, the mechanism of our eyes reveals another limit regarding this futile venture towards accuracy. As the scale of the objects grows smaller in the hope of reaching accuracy, the human eye reaches its limits since it is impossible to observe anything smaller than a photon of light—because our eyes rely on the reflection of such photon to capture the visible form of the object. Moreover, it is also important to mention that as an object becomes more complex (the architectural object), perfect accuracy is even further from our grasp — and can only be recognized as a futile dream.

This impossibility of pure precision is the evidence of the contingent reality of our world and the inescapable state of the accidental.

### 3.1.3. Accident

Due to the contingent reality of the world and the impossibility of perfect precision, accidents are inevitable. Within the introduction of the book *Accident: A Philosophical and Literary History*, Ross Hamilton tries to capture the sense of accident with a few examples:

*A car hits Giacometti as he crosses the place des Pyramides, and he experiences a feeling of joy. A glance at a newspaper notice causes Rousseau to collapse on the road to Vincennes under the force of his vision of another universe. Montaigne is knocked from his horse in the Périgord and feels as though his spirit is hovering above his bleeding body. In his garden in Milan, Augustine opens a page in the Epistles and senses a divine light flooding his heart as he penetrates the meaning of what he reads.*<sup>61</sup>

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60. Hughes, Francesca. 2014. *The Architecture of Error, Matter, Measure, and the Misadventures of Precision*. London, England: The MIT Press. Page 17.

61 . Hamilton, Ross. 2007. *Accident A Philosophical and Literal History*. Chicago: The University of Chicago Press. Page 1.



These series of surprising and life-changing experiences explain the notion of accident in two different ways.

### 3.1.3.1. Accident as Event

The first interpretation is the common notion of accident as an event, which results in physical change, such as Giacometti's car crash or Montaigne's falling from his horse. The accident as event can result in positive and negative effects on human life. However, two aspects exist concurrently with one another, serendipity and disaster (fig. 29,30):

***Disaster:** A sudden accident or a natural catastrophe that causes great damage or loss of life<sup>62</sup>*

***Serendipity:** The occurrence and development of events by chance in a happy or beneficial way.<sup>63</sup>*

For instance, within his introductory essay to the Reiser + Umemoto book *The Atlas of Novel Tectonics*, Sanford Kwinter describes the famous accident that produced guncotton :

*After failing in his attempt to dissolve a wad of cotton in a mixture of nitric and sulfuric acids, a German chemist named Christian Friedrich Schonbein placed the sodden lump of threads to dry on his hot stove and went home for supper. With no further need of encouragement, the great mysteries of chemistry and matter set about to do their work. Poor Schonbein never saw his laboratory again, but the world had guncotton.<sup>64</sup>*

Within the event of the accident of the invention of guncotton, the serendipitous event of the discovery of guncotton (which led to advancements within the fields of rocketry, ballistics and aeronautics) was parallel to the

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62. Oxford Dictionaries, s.v. "**Disaster**," accessed June 8, 2019

63. Ibid. **Serendipity**

64. Reiser, Jesse, and Nanako Umemoto. 2006. *Atlas of Novel Tectonics*. New York: Princeton Architectural Press. Page 12.





*Figure 29: Kora, John Chamberlain, 1963.*



*Figure 30: The Fighting Temeraire, tugged to her last Berth to be broken up, Joseph Mallord William Turner, 1838.*



disastrous event of the burning of Schonbein's laboratory.

Similarly, Paul Virilio, cultural theorist and original framer of the accident thesis, reveals in his book *Unknown Quantity*, "To invent the train is to invent the derailment. To invent the private car is to produce the motorway pile-up."<sup>65</sup> The disastrous form of accident creates its own discrete history from, but parallel to, the history of serendipitous accidents.

### **3.1.3.1.1.Synthesis**

From the relationship between these two aspects of accident-as-event, one can associate serendipity and disaster with the threefold of the Hegelian dialectic (Thesis – Antithesis - Synthesis).<sup>66</sup> There are two ways that the Hegelian dialectic can interact with the two aspects of accident-as-event. First, for the serendipitous part of accident to occur, there need to be many failed attempts similar to Schonbein's many attempts to dissolve cotton in acid or many car crash tests that are done to set parameters for the design of a safe car. One could even state that within the architectural field, the building code is a collection of serendipities derived from countless disastrous attempts at designing safe buildings. Basically, the dialectical method utilizes the antithesis or disaster as a means to develop the thesis into an eventual synthesis. Second, in the event of a serendipitous accident, there is a resultant disaster that is bound to be created. For instance, if the invention of the automobile is a thesis, it will result in the inevitable antithesis of highway car crashes, which is to be answered through the synthesis of the counterparts together, creating a new thesis of car crash tests and car

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65. Zago, Andrew. 2018. *Accident*. Art Paper Editions, 2018.Back Cover

66. Hegel, Georg Wilhelm Friedrich. 1991. *The Encyclopedia Logic: Part 1 of the Encyclopaedia of Philosophical Sciences*. Translated by W.A. Suchting, H.S. Harris, T.F. Geraets. Indianapolis: Hackett. Page 79-82.



designs ... and so forth. Simply, serendipity becomes the thesis within the dialectic, which is countered by the antithesis allowing for synthesis. This act of synthesis in both methods of use of the Hegelian dialectic, if aligned with teleological functionalism, will result in the extension of the beneficial portion of accident (serendipity) to the state of optimization and the point of making accident into a reproducible fact (as in the crash test) and thereby losing its ambiguity.

### **3.1.3.1.2. Pitilessness and Tragedy**

However, as the nature of advancements moves towards optimizing the serendipitous portion of accident, the assemblies become more complex (buildings, manufactured items) and the accidents will increase their frequency, sometimes speed, and scale. Soon the familiar disaster will correspondingly shed its familiar types of limited, distinguishable forms of disaster (car crash in the highway), into strangely wide-ranging and increasingly ambiguous outcomes, transforming the infrequent disruptive cases of disaster into a consistent terror of every moment. The continuous exposure to this continuous disaster (such as global warming), regardless of its imminent danger, will be numbed and withdrawn as the serendipitous portion of the accident is pushed and optimized further towards the absolute. For instance, an architectural object tries to respond to many oversimplified problems, and it exchanges all its ineffable potentials and ambitions to turn into functionally optimized junk-spaces patiently waiting for their further expansion, hence numbing and accelerating our grasp on time and the reality of the imminent threat of loss of architecture.

In his dialogue with Sylvere Lotringer in *The Art of Accident*, Paul Virilio briefly talks about the notion of the pitiless art and the danger of radicalism:



*In my opinion the term pious or impious are the same nature as good and evil, beautiful and ugly. For me the beautiful and ugly are the basis of aesthetics, and the true and false the basis of philosophy – to keep things simple. The pious and the impious are the dimensions we cannot get beyond. And I believe we can no longer broach the question of art, the question of politics, question of mores without saying : this is pious, this is impious. Today it is something that has been swept aside ... Precisely, the art of the twentieth century is an art that shows no pity, including toward the artist.<sup>67</sup>*

Virilio presents the state of pitilessness as a condition of the telos. Pitilessness is a state in which the thing—any entity—shows no flaw. Virilio explains this term (pitiless) as a substitute for the word impious. The opposite of the word ‘pious/pius’ used as the title of the catholic popes, which is used to describe someone that shows or has pity (flaw) before god.

Therefore, one could say that the optimization of the serendipitous portion of accidents towards the extreme of pure functionalism (the state where only function remains, and form is completely sacrificed for it) would only result in a pitiless architecture. Hence, it would not be possible to raise a question of architecture alongside the list mentioned by Virilio.

Art is not separate from the contingent world. Hence it becomes a product of accident. Therefore art is also not free of tragedy (disaster), and if architecture is entangled with art and co-exist in the same contingent world, it cannot be separated from the notion of tragedy. However, the state of optimized serendipity within accident does not allow for any sort of palpable tragedy. Hence, it is pitiless. This pitiless artefact of the teleological approach of the anthropocentric worldview always thrives and builds upon the goal of reaching a pure telos, and for that, the optimized serendipity within the accident will work as a veil to hide the growing disaster (tragedy).

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67. Virilio, Paul, and Sylvère Lotringer Lotringer. 2005. *The Accident of Art*. New York: Semiotext(e).Page27,28.



### 3.1.3.2. Accidental Characteristics

The second of Hamilton's explanations of accident is the notion of accident as accidental characteristics rooted in Aristotle's components of the world, which divides things (or objects in OOO) based on their structure patterns and behaviours<sup>68</sup> into ten categories. : (1) substance; (2) quantity; (3) quality; (4) relatives; (5) place; (6) time; (7) being in a position; (8) having; (9) acting; and (10) being acted upon.<sup>69</sup> Nine out of the ten are denoted as accidental characteristics of a thing, as they are considered inessential to the first quality of the thing, its substance or essence. For an instance of this division of substance and accidental characteristics, we may use Hamilton's example of Augustine: "In his garden in Milan, Augustine opens a page in the Epistles and senses a divine light flooding his heart as he penetrates the meaning of what he reads"<sup>70</sup> The division of the noted example into Aristotle's ten categories will be as such:

*Augustine as substance; his height (quantity); his dark skin tone (quality); single (relatives); Milan (place); today (time); sitting (position); holding a book (having); reading (activity); a divine light flooding his heart as he understands the meaning of what he reads (being acted upon).*<sup>71</sup>

By changing any of the accidental characteristics, there would be no changes to the Augustine-ness of Augustine. For instance, if we assume that on the previous day Augustine was standing with a group of people in Florence and was talking to them<sup>72</sup>, the substance (Augustine) remains unchanged.

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68. Hamilton, Ross. 2007. *Accident A Philosophical and Literary History*. Chicago: The University of Chicago Press. Page 3.

69. Ibid. Page 3.

70. Ibid. Page 1.

71. Ibid. Page 1.

72. Ibid. Page 3.



### **3.1.3.2.1. OOO, Substance, and Accidental Characteristics**

To draw a parallel between this Aristotelian separation of the substance and the accidental characteristics of an object and the OOO perspective towards objects, it is essential to understand the notions of the sensual object and real object in OOO. Graham Harman introduces the two concepts of sensual and real objects as such: first, a sensual object is the object that is experienced; basically the sensual object is an accumulation of all the characteristics attained through undermining, overmining, and duomining methods as an object which is experienced through an anthropocentric perspective. Second, the real object is the object that is withdrawn from experience, as it is beyond the limits of an anthropocentric perspective<sup>73</sup>.

Therefore, a parallel can be drawn between the two object-oriented concepts of real objects and the sensual objects, with the notions of substance and accidental characteristics. The appearances that are accumulated through the methods of undermining, overmining, and duomining all fall into the nine accidental categories as accidental characteristics. For instance, a table is explained as a piece of furniture (relatives) with a flat top and one or more legs (quantity), providing a level surface (acting) for eating, writing, or working (being acted upon) as well as substance, which in this case is the tableness of the table. This tableness as substance is withdrawn from experience as the real object is within OOO philosophy.

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73. Harman, Graham. 2011. *The Quadruple Object*. Winchester, England: Zero Books. Page 49.



## **3.2.Poetics**

### **3.2.1.Accident and Poetry**

As mentioned, due to the contingent reality of the world, processes and diagrams (propositions) are exposed to the impact of chance, hence turning them all into accidents-as-event. The outcome is usually a mixture of serendipitous or disastrous. Through the OOO viewpoint, this outcome as one of the main parts of an accident is to reveal new sensual characteristics (accidental characteristics) through a collision of objects (and when OOO speaks of objects, it means an entity of any kind, such as a dream). Instances include the sound of the collision of rain with a tin roof; the intense flame after the exposure of guncotton to heat in Schonbein's laboratory; the combination of the redness of wine with the vastness of sea in the traditional English translation of an epithet in Homer; Augustine's reading the Epistles and sensing a divine light flooding his heart. All these collisions create new objects.



### 3.2.1.1. Causality

In his article “*An Object-Oriented Defense of Poetry*,” Timothy Morton talks about the idea of the collision of objects<sup>74</sup>. He starts by looking at Percy Shelley’s article “*In Defense of Poetry*” and its specific argument that “humans are like Aeolian harps,”<sup>75</sup> intended to highlight the influence of surrounding objects in the poet’s creative process.

*Man [sic] is an instrument over which a series of external and internal impressions are driven, like the alterations of an ever-changing wind over an Aeolian lyre, which move it by their motion to ever-changing melody. But there is a principle within the human beings, and perhaps within all sentient beings. . .*<sup>76</sup>

Through his analysis of this argument, Morton states that if humans are like wind harps, then the sentience is in harmony or out of tune with other objects, meaning that the state of being sentient is a state of attunement. From this point of view, one could state that thinking is derived from a physical process or collision<sup>77</sup>. For instance, thinking about the sound of a wind harp is an action caused by the vibration of the wind harp. From this notion, Morton infers Shelley’s transcended anthropocentrism which associates the nonhuman with OOO and states that “if a sentient being is like a wind harp, and if, moreover, sensation (collision) and thinking are ontologically similar to one another, then we can invert the image. Wind harps are like sentient beings”<sup>78</sup>. Through this inversion, one can conclude that this causality between the wind harp sound and our thinking, or between the wind blowing and a harp’s strings’ vibrating, is all but a series of relations. Put differently, if the collision of objects is similar to thinking, thinking is caused by the impact of other objects (surrounding). This series of a causal chain of collisions of sensual objects (accidental characteristics)

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74. Morton, Timothy. 2012. “An Object-Oriented Defense of Poetry.” *New Literary History* 205-224.

75. Shelley, Percy Bysshe. 2012. *A Defense of Poetry, and Other Essays*. Austin: West by Southwest Press. Page 31.

76. *Ibid.* Page 31.

77. Morton, Timothy. 2012. “An Object-Oriented Defense of Poetry.” *New Literary History* 205-224.

78. *Ibid.* Page 205-224.



will allow the formation of new objects. This form of causality is called “vicarious causation” by Harman. He explains the vicarious portion of the term as the intermediary or proxy. To explain this, he compares vicarious causation to formal causation:

*Vicarious causation, of which science so far knows nothing, is closer to what is called formal cause. To say that formal cause operates vicariously means that forms do not touch one another directly, but somehow melt, fuse, and decompress in a shared common space from which all are partly absent. My claim is that two entities influence one another only by meeting on the interior of a third, where they exist side-by-side until something happens that allows them to interact. In this sense, the theory of vicarious causation is a theory of the molten inner core of objects—a sort of plate tectonics of ontology.<sup>79</sup>*

Harman further states that the causation of interaction between two objects is always vicarious (through/within the interior of a third entity), and that the interaction between entities are “asymmetrical,” which means that the interaction/accident unfolds between a real object and the sensual. This asymmetrical interaction between the real object and the sensual object is “buffered,” which means that the real object and the sensual exchange after interaction do not fuse together; instead, the interaction births a new object with its own real object and sensual object alongside the objects interacting. For instance, the sounds created through the interaction/collision of rain (real object) with a metal sheet’s elastic molecular structure allows vibration (sensual object/ accidental charactersitics).

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79. Harman, Graham. n.d. “On Vicarious Causation.” Collapse (urbanomic) II. Page 171–206.



### 3.2.1.2. Metaphor

With the notion of vicarious causality present in the process of making new objects, Morton focuses on the method generating collisions within the art of poetry, i.e., metaphors. He starts by visiting the etymology of the word “metaphor”: “Metaphor: (Origin) Late 15th century: from French *métaphore*, via Latin from Greek *metaphora*, from *metapherein* ‘to transfer’.”<sup>80</sup> For Morton, the act of transferring is synonymous with the notion of collision of objects. For instance, the wine red sea of the traditional English translation of an epithet in Homer is, in fact, the collision of the real (substance of sea) with the accidental (sensual) characteristics of wine which in this case is the colour red. The red (accidental characteristics / sensual characteristics) of red wine is transferred through sea (substance), creating a new object of wine red sea. Therefore, it is not far out of reach to say that the collision of the objects within a poem are similar to the accidents of architecture.

### 3.2.1.3. Haecceity

*Over the wintry  
forest, winds howl in rage  
with no leaves to blow.*<sup>81</sup>

With the notion of accident as a physical event and the resultant entity as a tangible object, it is easy to arrive at the assumption that the subsequent entities of accident-as-event are always physical things and long duration objects, such as the broken pieces of a ceramic pot that have been dropped onto the ground. However, the resultant objects or entities that are produced by accident (event) are not always defined by their physical nature

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80. Oxford Dictionaries, s.v. “metaphor,” accessed June 8, 2019

81. Haiku by Natsume Soseki



nor are they continuously defined by what function they fulfil. For instance, a season, autumn, a sound of rain hitting a pane of glass, and a warmth of the rays of the summer sun are all defined individual objects that are shaped by the accident-as-event, though their mode of individuation is different to that of a person or of a material object due to their fleeting life span and their intangible and nonphysical nature.

Similar to many material object remnants of accidents, these fleeting events are defined by the sum total of all materials and elements belonging to it, for instance, the photons that shape rays of light of the summer sun or the air particle transferring the sound wave of a snap of fingers, and the sum total of intensive properties and characteristics. Coining the term “haecceities” in their book *A Thousand Plateaus*, Gilles Deleuze and Félix Guattari maintain:

*We reserve the name haecceity for it. A season, a winter, a summer, an hour, a date have a perfect individuality lacking nothing, even though this individuality is different from that of a thing or a subject. They are haecceities in the sense that they consist entirely of relations of movement and rest between molecules or particles, capacities to affect and be affected.*<sup>82</sup>

Accident-as-event must encompass haecceities, not just as an encompassing object (the vicarious object) that allows for the accident to unravel, but as a significant factor in the individuation and metamorphosis of things. A great example of the use of haecceities, as a way to create this encompassing object, is the haiku. Here is a telling example:

*Furuike ya  
kawazu tobikomu  
mizu no oto*<sup>83</sup>  
*Fu-ru (old) i-ke (pond) ya,  
ka-wa-zu (frog) to-bi-ko-mu (jumping into)  
mi-zu (water) no o-to (sound)*

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82. Deleuze, Gilles, and Félix Guattari. 2004. *A thousand plateaus: capitalism and schizophrenia*. London: Continuum. Page 261.

83. Old Pond Haiku by Matsuo Bashō



For instance, after the frog's leap, the sound of the water (a fleeting object) changes the whole pond and the imagery created by the poem.

### 3.2.2.The Poetics of Accident in Representation

#### 3.2.2.1.Drawing

*He drew his sword. Translation*  
*He drew an apple. Transcription*

The act of drawing is entangled with the core of architecture as it is a medium that has been used throughout architectural history. Most commonly, when speaking about the notion of drawing regarding architecture, it is assumed that drawings are conventional sets of projections, at various scales, encompassing both the site and the small-scale details of the project, creating an objective idea of a building.<sup>84</sup> In other words, similarly to the use of paintings as a recording medium in the times before the invention of photography—which was intended to capture and transcribe events and objects as accurately as possible—architectural projection drawings are also a series of syntactically reduced parts of a divided whole, aiming towards an explicit representation of the whole through parts as a way to reduce the possibility of misinterpretation. This reduction of the possibility of accidents causes the drawings to become a transcription of the building. Very little information is being generated through this process as accidents are limited and reduced.

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84. Pérez-Gómez, Alberto , and Louise Pelletier. 2000. Architectural representation and the perspective hinge. Cambridge, Massachusetts: MIT Press. Page 3.



However, there is a second way which architects practice drawing that is more compatible with the notion of contingency and accidents as a generative process. This method of drawing focuses more on the process of making and composition of the idea rather than a rudimentary one-to-one representation of a set object. Within this case, the notion of drawing works as an ‘accident machine’ that allows for the exploration of a multitude of ideas through a raw and unfiltered process of collision of objects (thoughts, drawing medium, drawing surface, walls, haecceities). The ‘accident machine’ drawings could also be called action drawings.

### **3.2.2.2. Action Drawing**

The term action drawing was coined to describe the post-World War II art movement in American painting called “action painting”: an art movement that expanded beyond the use of traditional modes of representational painting for a more accident-driven, meticulous craft of abstractions. For instance, Jackson Pollock’s dripping technique used within his action paintings is a careful study of methods of paint delivery (turkey baster, dried-up ruined brushes, stirring sticks and the handle of paint brushes) (fig. 31,32), exploration of different viscosities of paint and its interaction with gravity, and various hand motions and actions in midair without touching the horizontally laid canvas.

If action painting is about these various techniques and incorporating the idea of accidents, such as smearing, dripping, and sweeping brush strokes of paint to generate complex abstractions, then one could state that action drawing within the field of architecture is the composition of planes, volumes, topography, computer-generated renders, photo collages, and drawings that



investigate and generate new architectural ideas. If, as Morton states, thinking is synonymous with a physical interaction of objects, and if Harman's objects include things such as thoughts, the drawing medium (pen, pencil, charcoal, ink, and brushes), the drawing surface, the light shining into the room while we draw, or the humidity left on the page from the strokes of watercolor and so forth, are all objects that come together to compose a drawing. Therefore, one could state that action drawing within the field of architecture is a method which uses the action of drawing as a generative process of thinking, collision, and making accidents. The action is a (transferring) presentation of new objects through the process of thinking rather than representing the existing. There are many architects who have explored and investigated their architectural ideas through their own methods, including doing action drawings. Examples range from Carlo Scarpa's method of layering various pieces of information on a single drawing, with the change of scale and angle of projection; his jumping from plan drawings to sectional details using various colors and slight introduction of materiality within his drawings of "Brion Cemetery" (fig. 34); Peter Eisenman's sequencing technique used in his "House IV" project to show the unfolding of the design and the presentation of the red ribbon of his ideas (fig. 35); the cut-and-paste poetics of Mies van der Rohe's photomontage renderings (fig. 36). More recent instances are found in such contemporary works as the collaborative drawings of Perry Kulper and Nat Chard's intense and complex exercise in *"Pamphlet Architecture 34: Fathoming the Unfathomable: Archival Ghosts + Paradoxical Shadows,"* which merges various two-dimensional drawing methods with three-dimensional models and objects (fig. 38,39,40).





*Figure 31: Painter Jackson Pollock, Cigarette in Mouth, Dropping Paint, Martha Holmes.*



*Figure 32: Autumn Rhythm, Jackson pollock, 1950.*





*Figure 33: The Bride Stripped Bare by Her Bachelors, Even, Marcel Duchamp, 1923.*



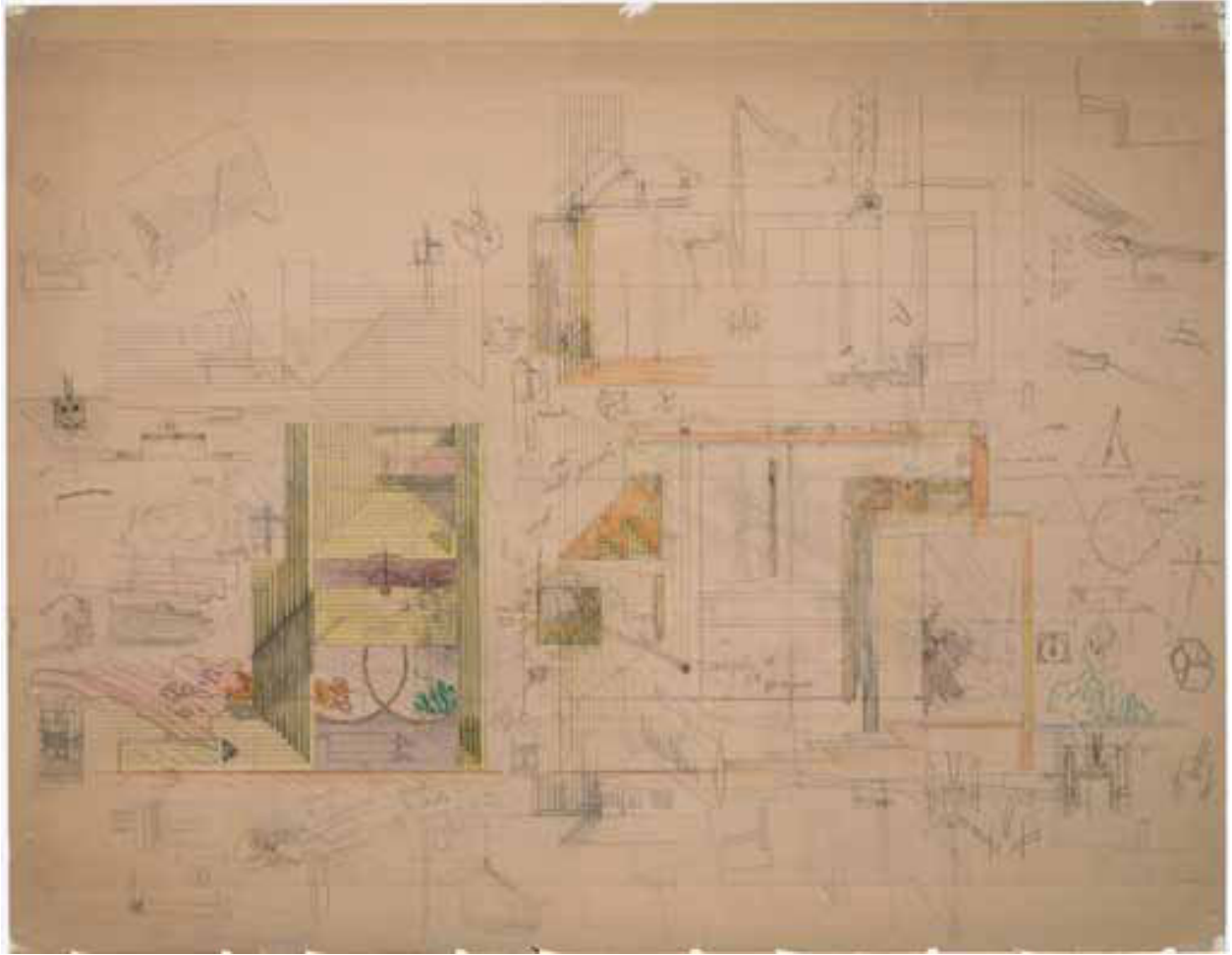


Figure 34: Brion Cemetery, San Vito d'Altivole, plan, section and elevation, Carlo Scarpa, 1969.

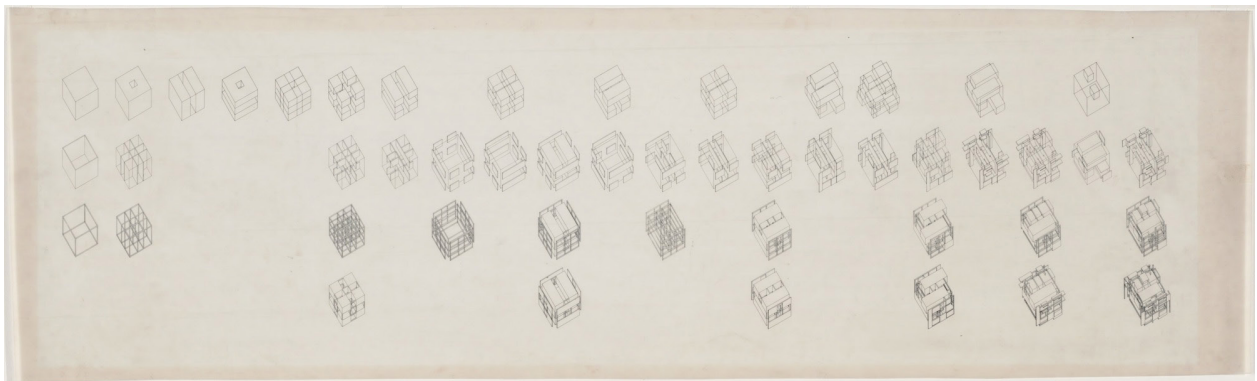


Figure 35: House IV Project, Falls Village, Connecticut (Axonometrics), Peter Eisenman, 1975.









Figure 38: No 015 –All is Dampened by a Liquid Silence, Perry Kulper.





Figure 39: Pamphlet Architecture 34: Fathoming the Unfathomable, Perry Kulper, Nat Chard.

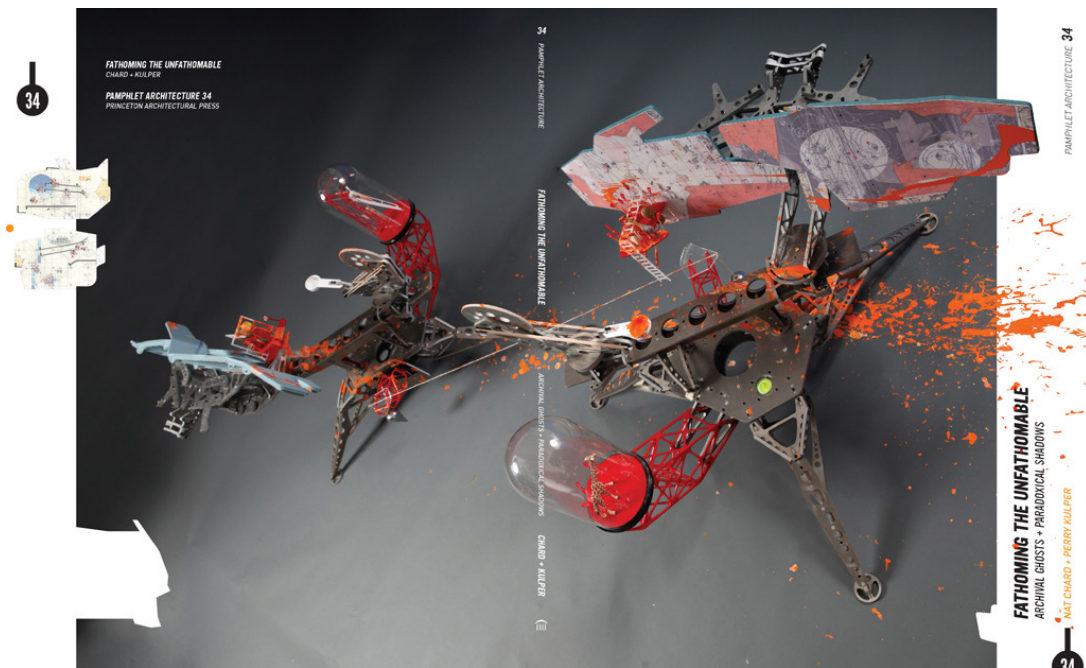


Figure 40: Pamphlet Architecture 34: Fathoming the Unfathomable (cover), Perry Kulper, Nat Chard.



# CHAPTER 4



## 4.1. An Accidental Architecture

An accidental architecture is a complex exercise in which the design of the architectural object further expands beyond the common notion of functionality of simple closed system based on the anthropocentric (human-object tool-relations) perspective to encourage and acknowledge the contingent reality of the world and the inevitability of accidents. An accidental architecture operates within an open ecology in which hyper-objects<sup>85</sup> collide and interact. Moreover, the design of an accidental architecture composes poetic accidents, creates metaphors, and evokes memories of haecceities through the use of interactions between an object's fathomable accidental characteristics with their withdrawn realities through a series of vicarious causalities. This is done through the meticulous process of action drawings, exploring and using various drawing methods and mediums.

### 4.1.1. House of Accidents

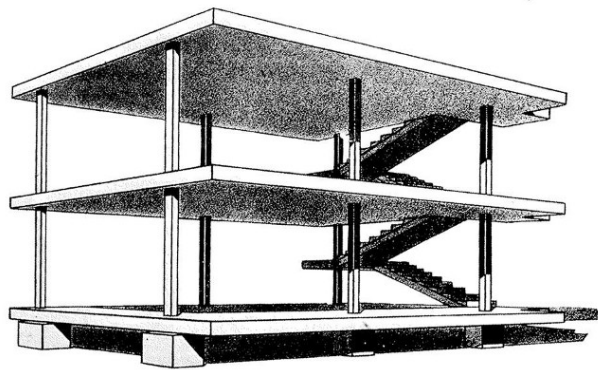
As an architectural object for human habitation, the house is one of the most widely developed types of architectural objects that has been used as an analogue for examination and exploration of numerous architectural hypotheses. Instances include the collection of houses by John Hejduk (fig. 45-48), "The Farnsworth House" (fig. 44) by Ludwig Mies van der Rohe as an exercise analogue in minimalism and the idea of "bienahé nichts" or "almost nothing," the collection of houses by Peter Eisenman (House I to X) (fig. 43), "The Endless House" by Frederick Kiesler (fig. 42), "Dom-ino House" by Le Corbusier (fig. 41) and the examples of Laugier and Semper's "Primitive Huts." This use of the house type as an analogue is due to the simplicity and malleability of the function and flexibility of the form of the house, which

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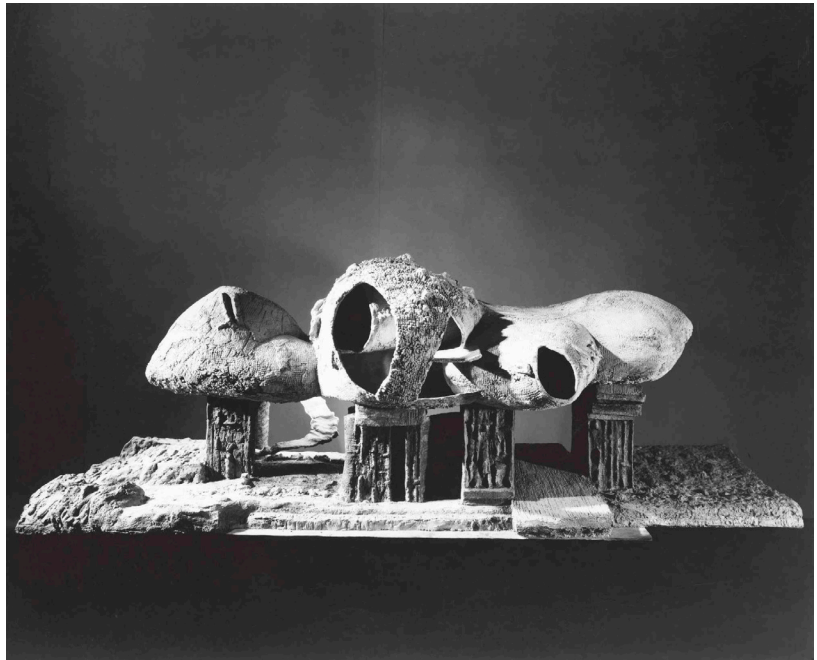
85. Morton, Timothy . 2013. *Hyperobjects: Philosophy and Ecology after the End of the World*. Minneapolis: University of Minnesota Press. Page 1.



give more freedom to designers in their modes of operation and explorations. Therefore, due to the freedom of design that comes with the use of house as an architectural analogue-type, the house type was selected for the exercise of making an accidental architecture and for further exploration of ideas and concepts in this thesis.



*Figure 41: Maison Dom-Ino, Charles-Édouard Jeanneret, 1914.*



*Figure 42: Endless House, Frederick Kiesler, 1950.*



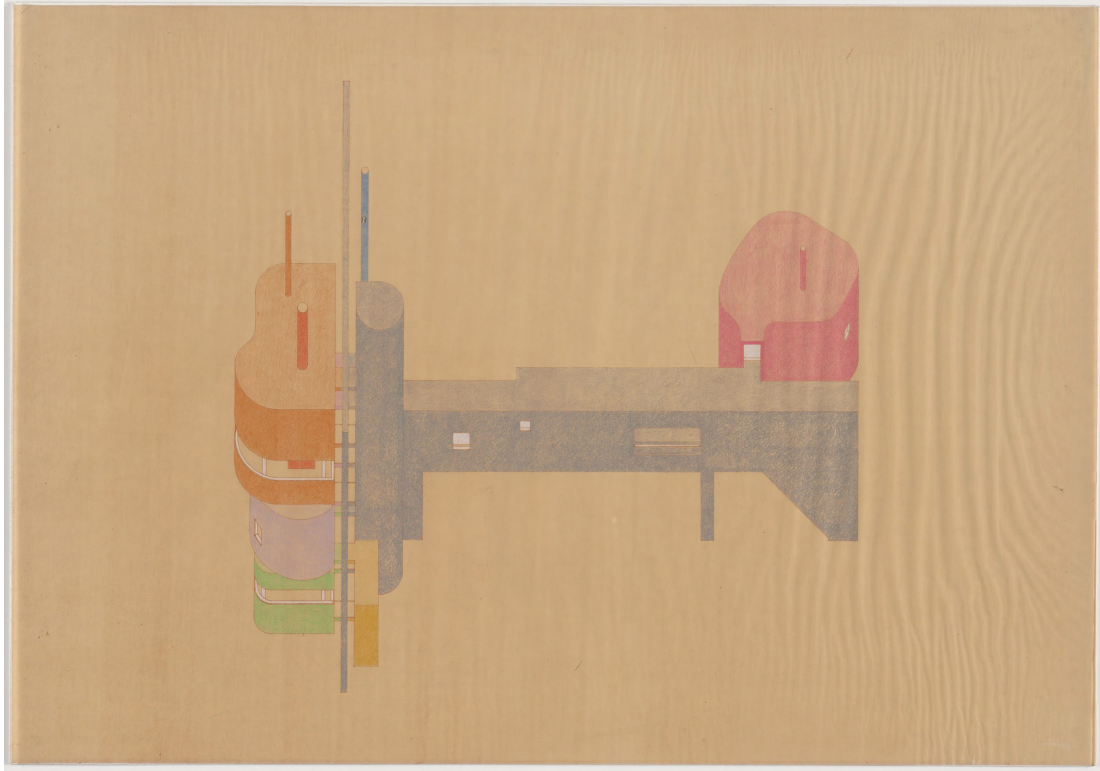


*Figure 43: HOUSE VI, Peter Eisenman, 1972.*

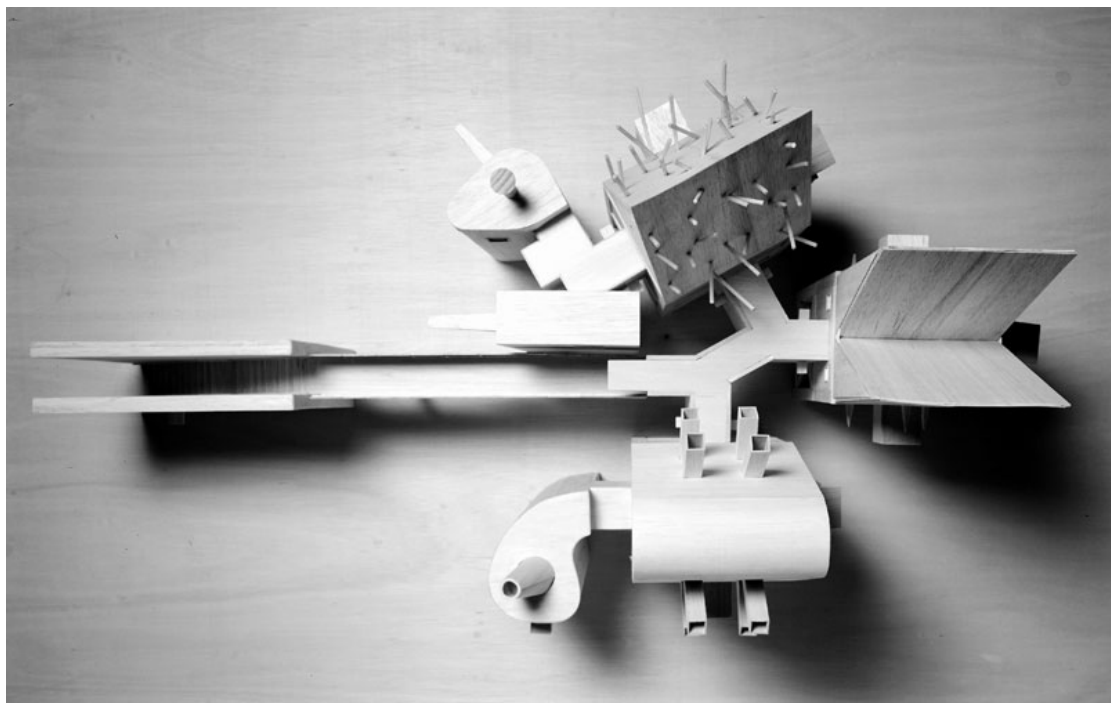


*Figure 44: Farnsworth house, Mies van der Rohe , 1951.*



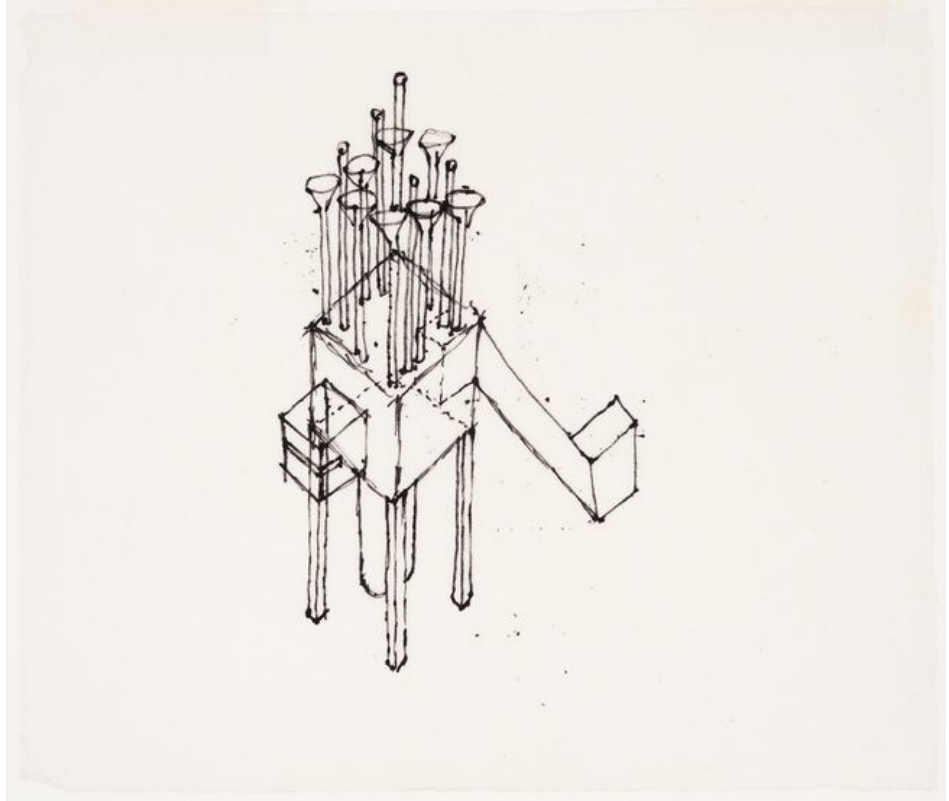


*Figure 45: Wall House 2 (A. E. Bye House) Project , Ridgefield, Connecticut, Isometric, John Hejduk, 1973.*



*Figure 46: House for a Poet, John Hejduk.*





*Figure 47: Widow's House, Lancaster/Hanover Masque, John Hejduk, 1980-1982.*



*Figure 48: The House of the Suicide and the House of the Mother of the Suicide, Praha, Alšovo nábřeží, John Hejduk, Jaro Zastoupil.*



#### 4.1.1.1. Accident House I

The first attempt at the composition of a house of accident was derived from the allure of the objects (Raku pot; mended broken pots; live edge table, rubbed-off, brass, door handle) that are described through the Japanese word of “Wabisabi,” a word made out of a poetic collision of two negative words:

*Wabi: the misery of living alone in nature, away from society*  
*Sabi: withered, lean, chill*<sup>86</sup>

which made a positive word, describing a worldview that is based on the acceptance of transience of things and imperfection. The aesthetics of this worldview is described as the beauty of things imperfect, impermanent, and incomplete.<sup>87</sup> In other words, it is a worldview that celebrates the contingency of the world, accidents, and the individuality of things. Under the umbrella of the aesthetics of Wabi-Sabi is the Japanese art of Kintsugi, which is the art of repairing and recomposing of broken pottery through the use of laquer mixed with gold powder. This method of mending does not disguise the repair and the fact of accident within the object. Rather, the method treats the accident as a history of the object which is always visible through the now-golden veins in the object, composing a novel and unique object through an accident. Usually, this method of Kintsugi is to repair the object back to the shape prior to its accident. For instance, broken bowl parts would be put together to recompose the bowl as closely as possible to the original shape (fig. 49). However, this was pushed further within the world of the contemporary arts to more than simple reconstruction of the same object. For example, the works of artists such as Yee Sookyung

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86. Koren, Leonard. 1994. *Wabi-sabi for Artist, Designer, Poets & Philosophers*. point reyes, California: Imperfect Publishing. Page 21.

87. Ibid. Page 7.



and her collection of *Translated Vases* (fig. 50) operates in the direction of composing a new object after the set accident, similar to the technique used by Marcel Duchamp in composing the *Network of Stoppages* (fig. 52) through the use of resultant objects produced via the *Three Standard Stoppages*. (fig. 51)



Figure 49: Kintsugi bowl.



Figure 50: *Translated Vase*, Yee sookyung, 2009.





*Figure 51: 3 Standard Stoppages, Marcel Duchamp, 1913-1914.*



*Figure 52: Network of Stoppages, Marcel Duchamp, 1914.*



Influenced by the method of Kintsugi and Yee Sookyung's "*Translated Vase*," the first attempt in this thesis was to create accident through casting two plaster objects and breaking them through the use of gravity (fig. 54). The resultant objects (randomly broken pieces of plaster) of this accident / collision of the fragile and brittle plaster casting, the gravity and the hardness of the ground (in this case, the concrete floor) were selected to be composed to design the first accidental house (fig. 55-58). Another influence on the design of the first accidental house was Carlos Scarpa's architecture, especially his "Castelvecchio Museum" (fig. 53) restoration project and his method of composing an interaction between the new renovation and the original building's architectural language through accentuating the aged nature of the old buildings by not disguising but celebrating them.

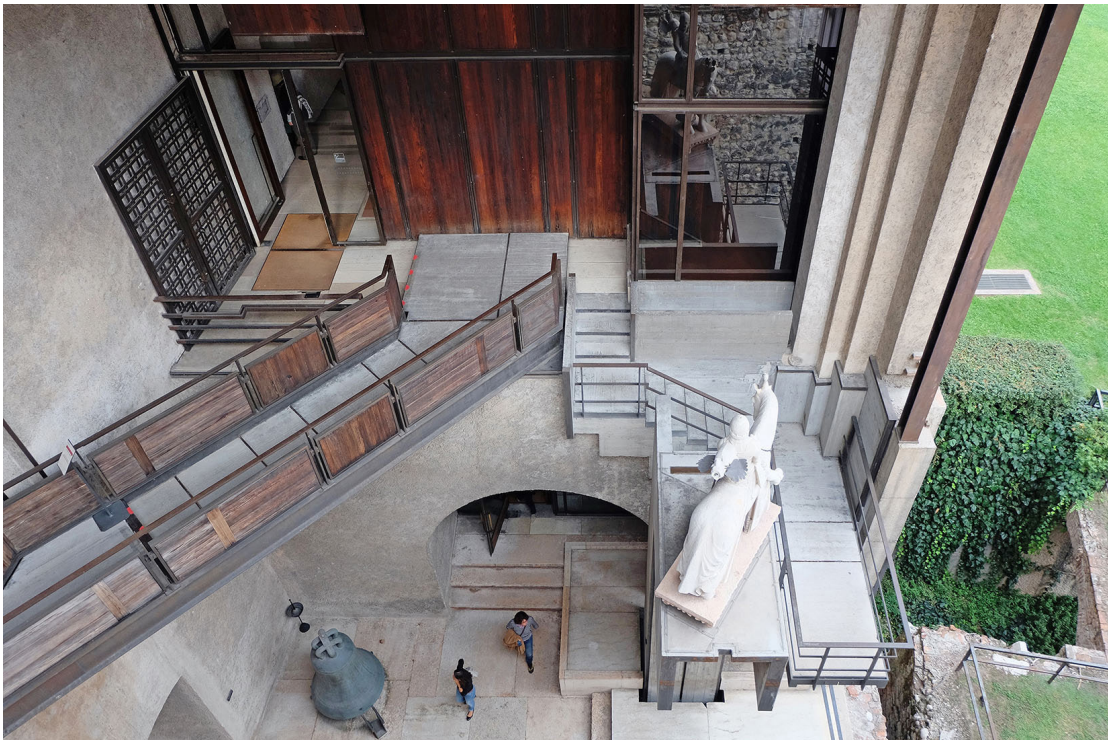


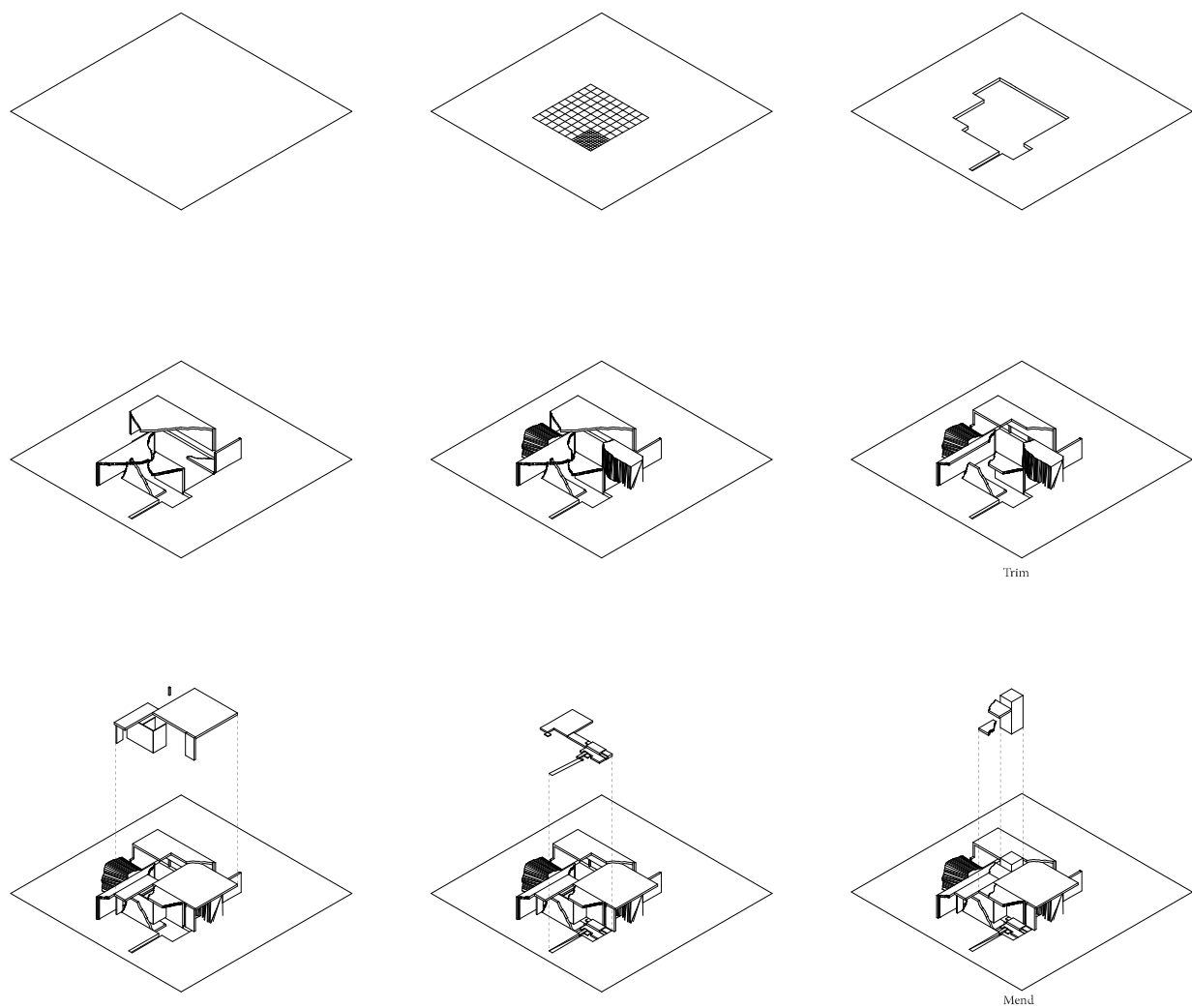
Figure 53: Castelvecchio museum , Carlo Scarpa, 1956 – 1974, Claudio Divizia.





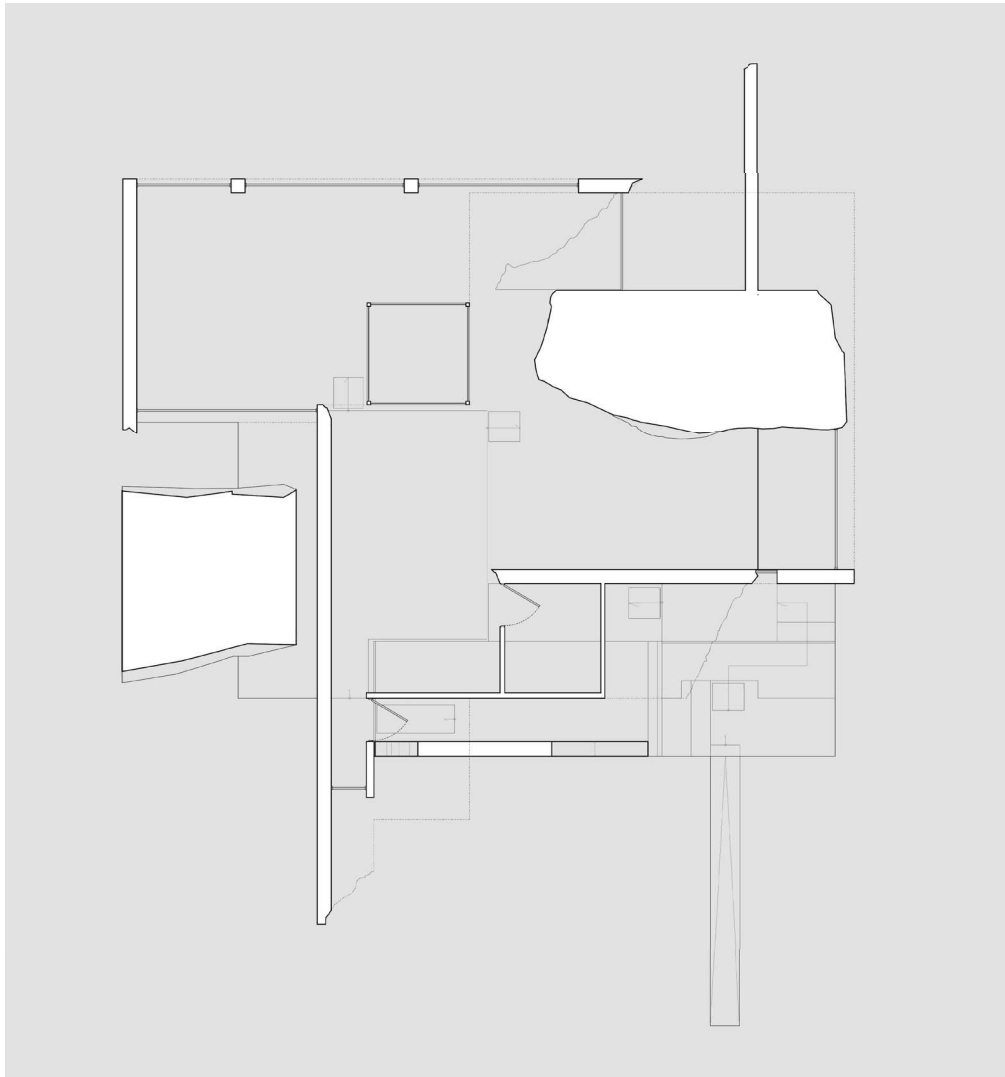
*Figure 54: Accident House I Plaster Casts, Kavosh Maleki.*





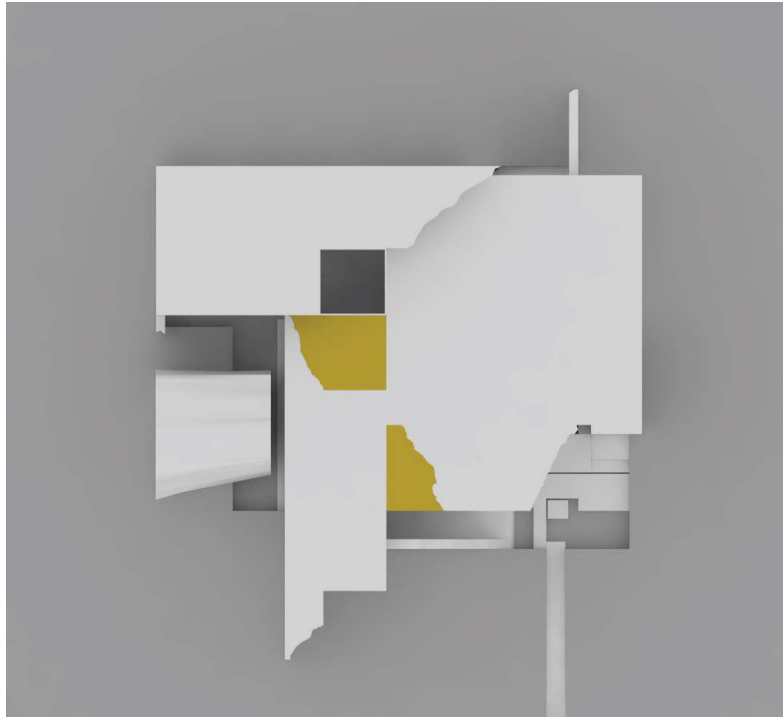
*Figure 55: Accident House I Composition Sequence, Kavosh Maleki.*



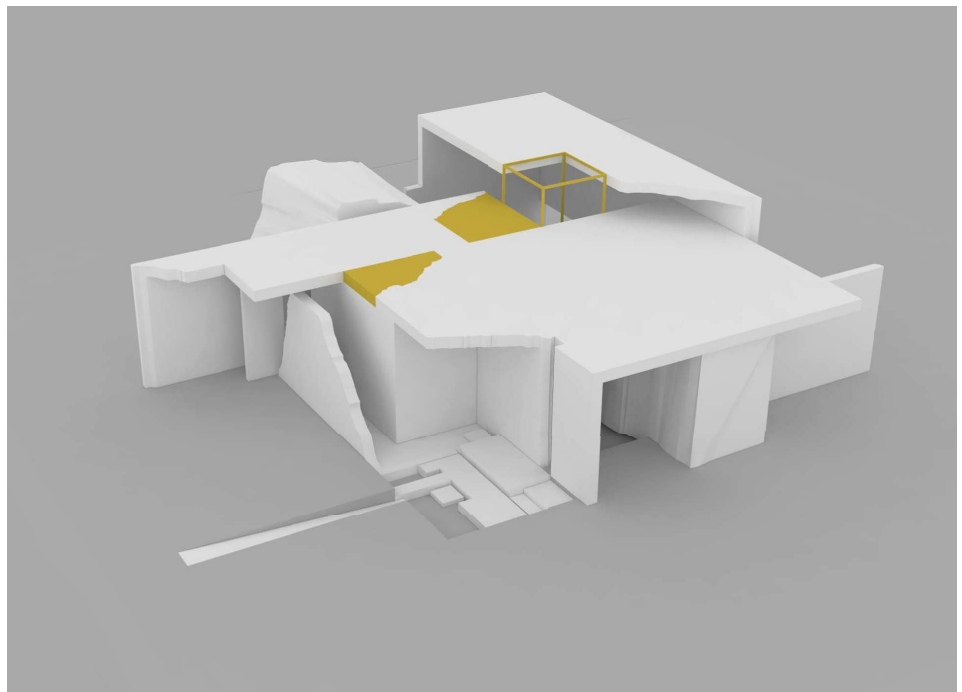


*Figure 56: Accident house I Plan, Kavosh Maleki.*





*Figure 57: Accident House I Massing,  
Kavosh Maleki.*





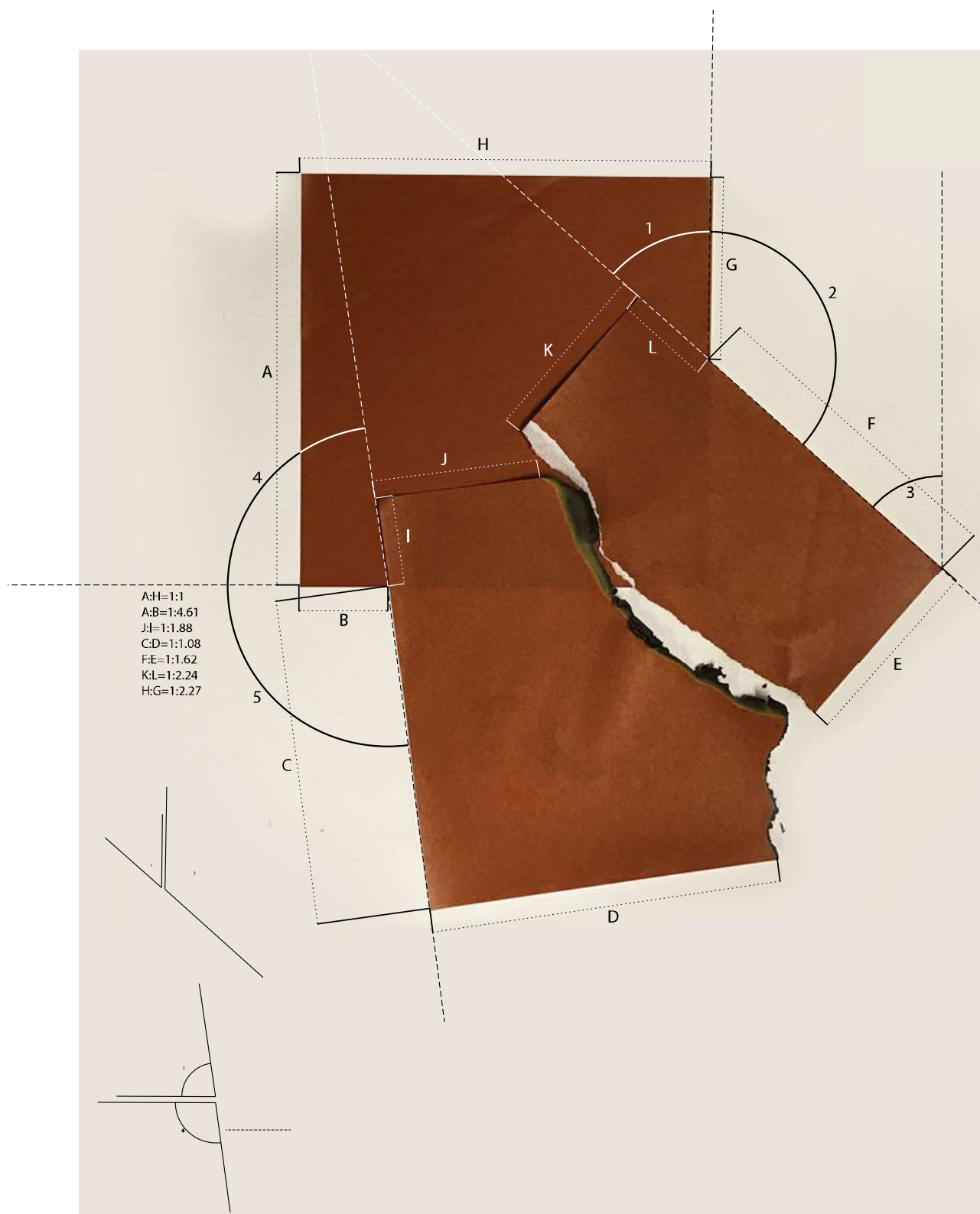


Figure 58: Accidental Composition Though Dropping Paper and Geometric Analysis, Kavosh Maleki.



### 4.1.2. The Five Rooms and Accidental Characteristics

The next design phase was influenced by the story-telling and interactions of objects (buildings) with subjects (the occupants and their memories) within John Hejduk's Lancaster Hanover Masque (fig. 60). The events to be accommodated in the rooms of the next house were structured on his division of the function of a house into five main activities of dining, living, cooking, bathing, and sleeping (fig. 59). The five rooms in the final thesis project were designed to work as a separate collision analogues for the making of different accidents and poetics. The accidental characteristics of the objects involved in the composition of the rooms work as a catalyst for the subsequent collision and accident within each room. Every room consequently was named through collision of two words (kenning) to create an adequate expression of the actions and accidents within each room. These accident rooms are as follows:

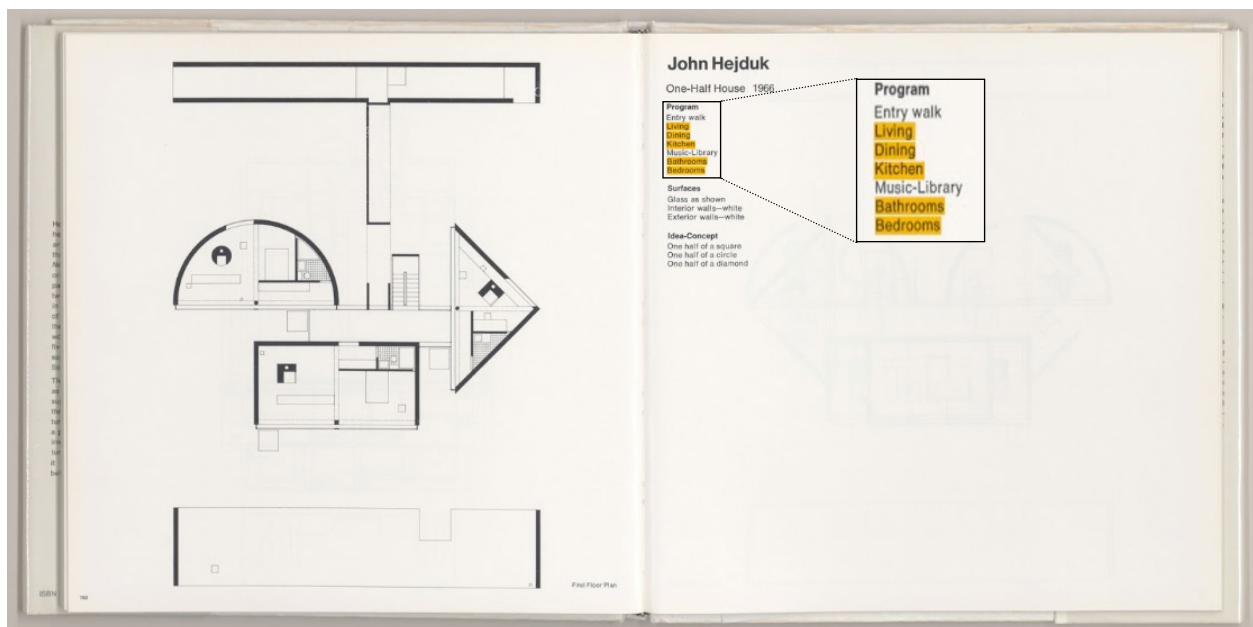
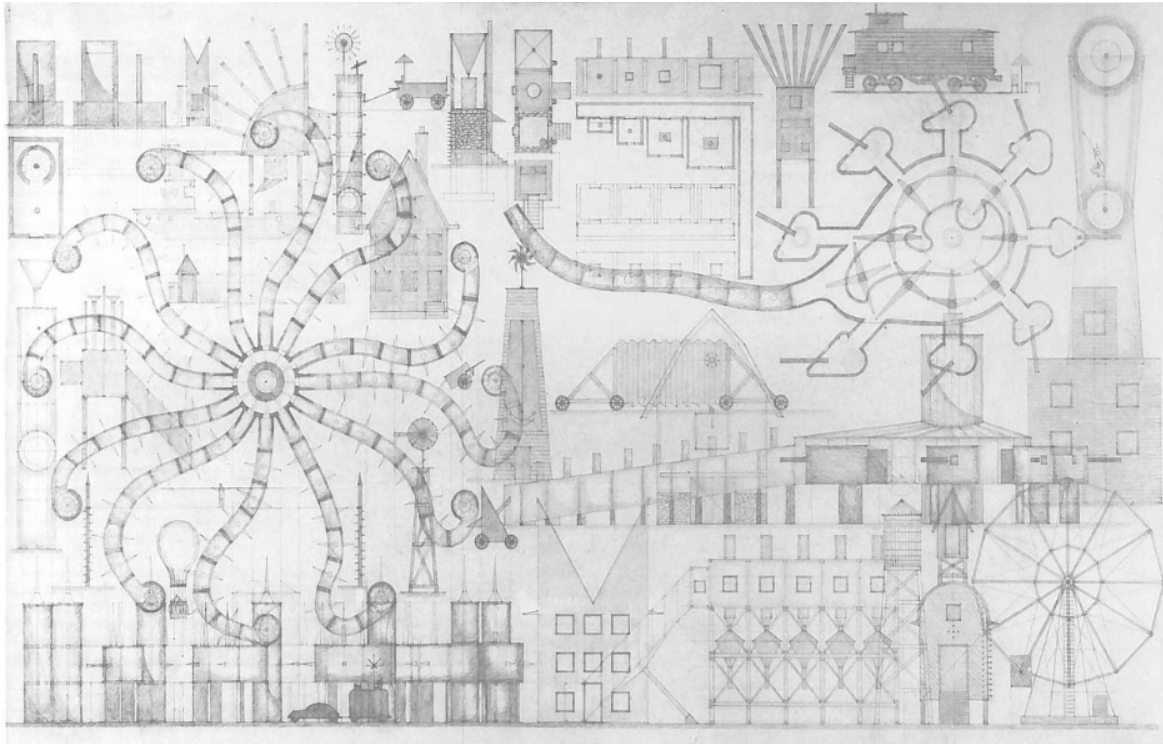


Figure 59: One-Half House, John Hejduk, 1966.



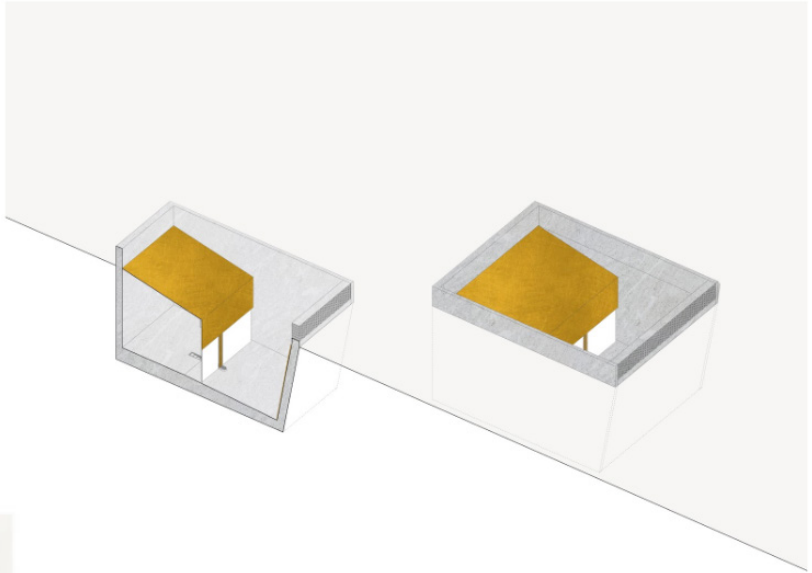


*Figure 60: Presentation drawing for the Lancaster/Hanover Masque, John Hejduk, 1980-1982.*

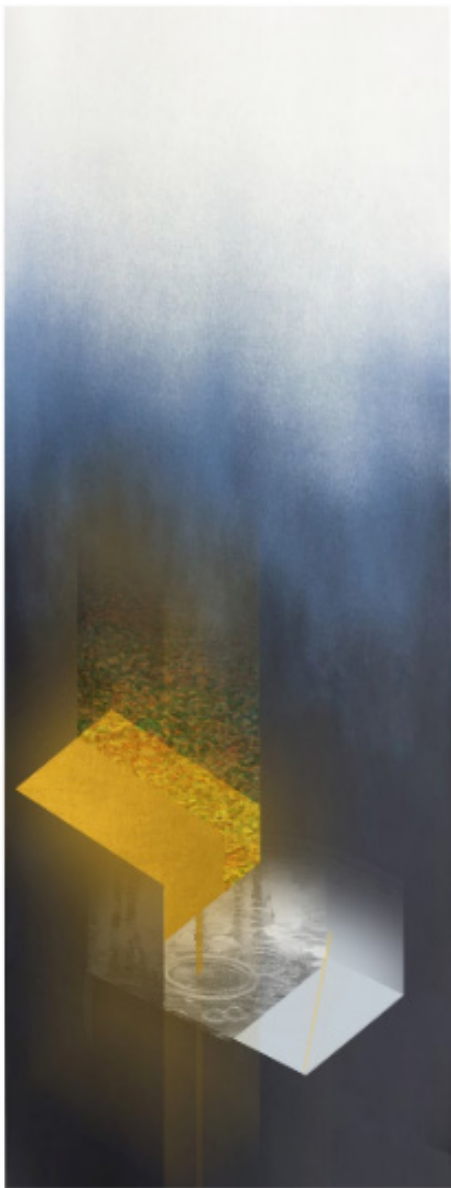
#### **4.1.2.1. The Rain Catcher**

Rain catcher (fig.61,62) is a room (vicarious object) composed to allow interaction/accident/collision between the brass, concrete, ground, rain, gravity, season, and light, which are to result in the formation of a multitude of new accidental objects and poetics in the form of tangible and intangible accidental objects (haecceities). Some instances of the haecceities are the sound of rain hitting the brass roof; the sound of rain hitting the concrete floor; the accumulation of rain water on the sloped floor; and the different sounds emitting from the impact of raindrops on the surface of accumulated water on the concrete floor. The rain catcher focuses more on the making of memories of haecceities, with a short duration(lifespan).





*Figure 61: Rain Catcher Axonometric Drawing, Kavosh Maleki.*



*Figure 62: Rain Catcher Accident Drawing, Kavosh Maleki.*



#### 4.1.2.2. Forest Bathing

Forest bathing (fig. 63-65) is a room similar to the rain catcher, designed to allow the interactions between various objects (autumn, gravity, layers, stain, sedimentation, rain, light, season, trees, reflections, winter, and snow), focusing on making new objects through collision / accident between the intangible objects, such as seasons and the time of the day which have greater and slower lifespans. This results in a slower process of making new objects, such as the stains that autumn leaves leave on the concrete blocks or the different mounds made out of the accumulation of the snow in the winter or of leaves on the ground during the autumn.

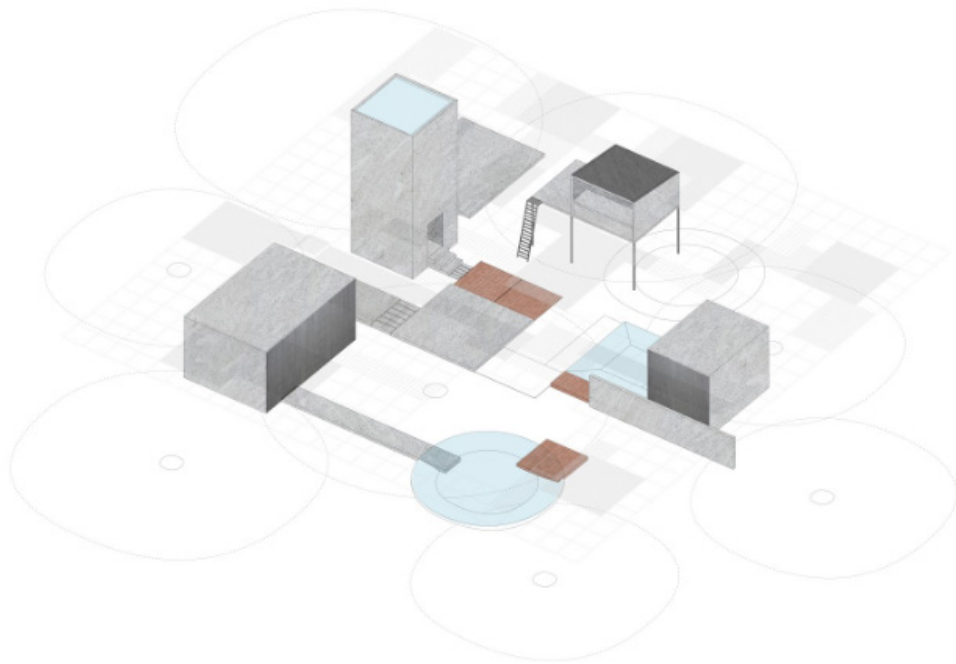


Figure 63: Forest Bathing Axonometric Drawing, Kavosh Maleki.





*Figure 64: Forest Bathing Accident Drawing Above the Net, Kavosh Maleki.*

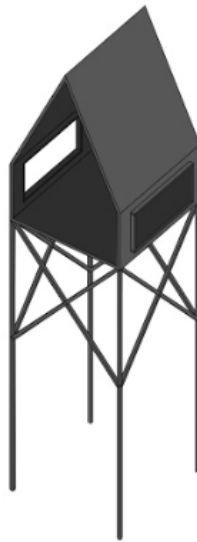


*Figure 65: Forest Bathing Accident Drawing Under the Net, Kavosh Maleki.*



#### 4.1.2.3. The Waiting Tower

The waiting tower (fig. 66,67) is designed within the setting of the play *Waiting for Godot* by Samuel Becket. Waiting tower is a room which is to interact with the concepts of time, waiting, views and the notion of duration, even longer than that of the forest bathing room. The play's main instance is Didi and Gogo's fifty years of waiting for Godot. The tower is designed to force the occupant to have a better field of view to see (possibly) Godot coming. However, it is done at the expense of their comfort, similar to the notions of serendipity and disaster, as the view ports are placed in a location that forces the user into an uncomfortable position to be able to observe the coming of Godot, making the waiting seem longer as a result. This room allows for the interaction of ideas, such as duration, waiting, and perspective within the vicarious theme and setting of the tragicomedy of *Waiting for Godot*.



*Figure 66: The Waiting Tower Axonometric Drawing, Kavosh Maleki.*



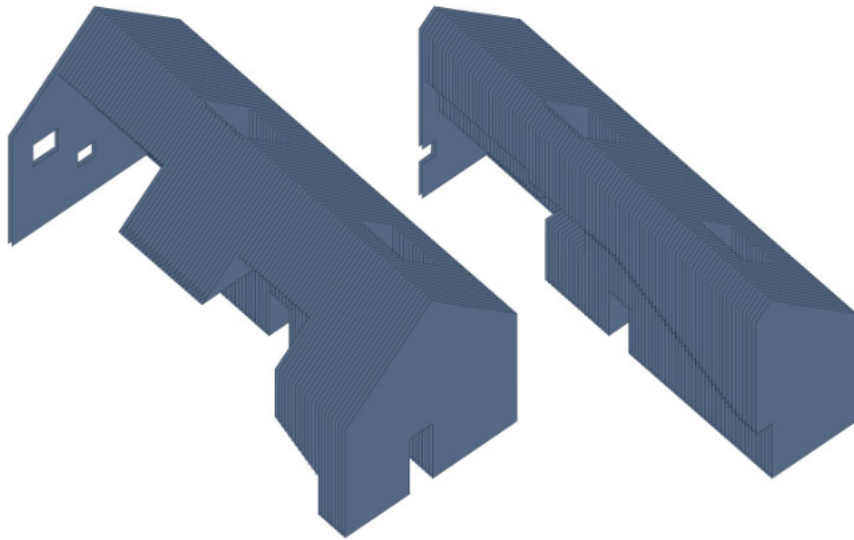


*Figure 67: The Waiting Tower Accident Drawing, Kavosh Maleki.*



#### 4.1.2.4. The Light Dyer

The light dyer (fig. 68,69) focuses on the interaction between fabric, gravity, sunlight, colours, fading of colour, transparency, and translucency to create accidents and poetic objects. The name refers to fabric that has been dyed a deep indigo. Sunlight shines within the room by filtering through coloured fabrics, fading the colour of the fabric due to the fading effect of direct sunlight. The light is modulated further with the changing translucency of the fabric by layering, the hanging of fabric due to gravity, and the movement of fabric due to the breeze of wind.



*Figure 68: The Light Dyer Axonometric Drawing, Kavosh Maleki.*





*Figure 69: The Light Dyer Accident Drawing, Kavosh Maleki.*



#### 4.1.2.5. The Synthesis Library

The setting for this room is the dystopian world of the novel *Fahrenheit 451* by Ray Bradbury. The synthesis library (fig. 70,71) is composed of two rooms with two bookshelves facing one another asymmetrically, one for reading and the other for writing. The fictional occupant is Guy Montag, the protagonist in the novel and his process of reading, memorizing, and rewriting. The synthesis library design is focused on the notion of synthesis as an accident, which makes objects of ideas and thoughts collide with one another. For instance, as Guy reads a book, he interacts with the ideas within the book. However, he understands it based on his comprehension ability. Then, when he rewrites the book from his memory, the thoughts and ideas are in collision with one another resulting in a new thought and idea that is to be translated into words through writing. In other words, the ideas within the book are in collision with the other ideas within Guy Montag's mind through his ability to comprehend, allowing for a sort of translation synthesis rather than transcription.

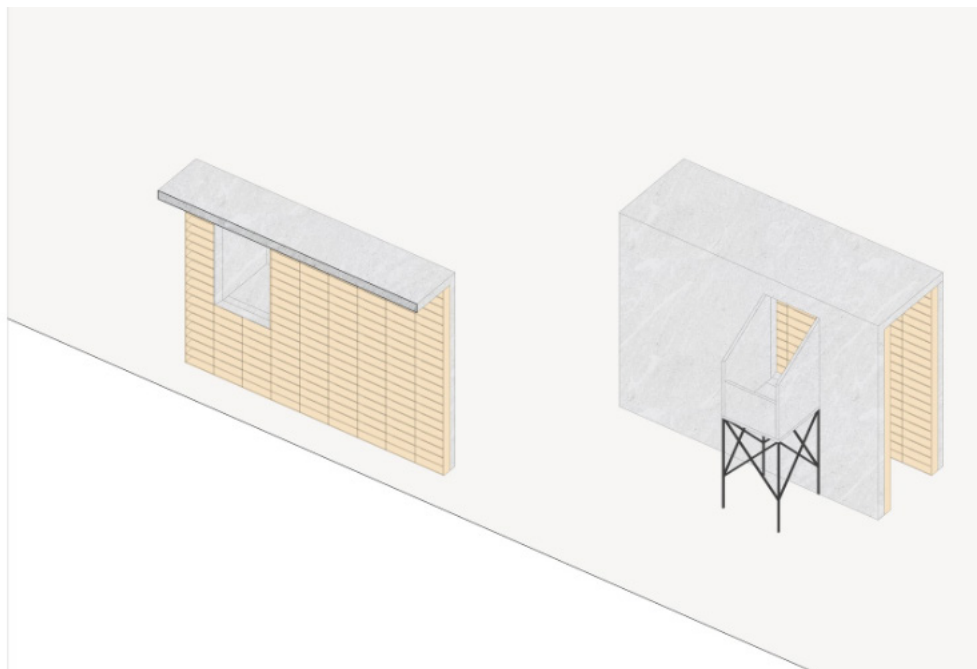
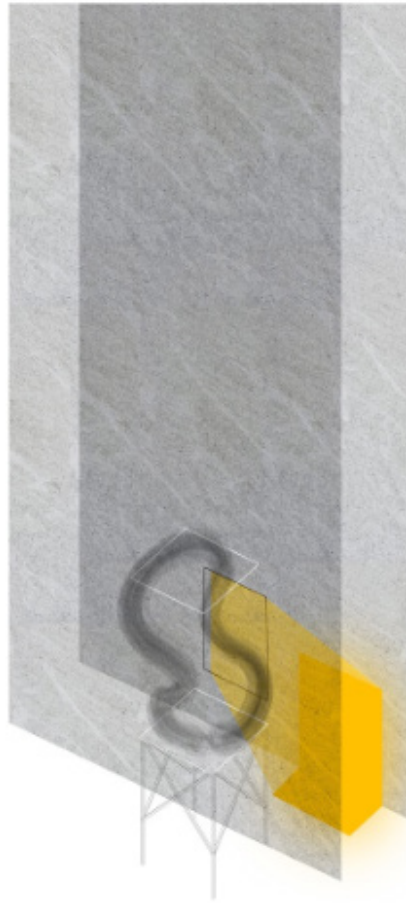


Figure 70: The Synthesis Library Axonometric Drawing, Kavosh Maleki.





*Figure 71: The Synthesis Library Accident Drawing, Kavosh Maleki.*



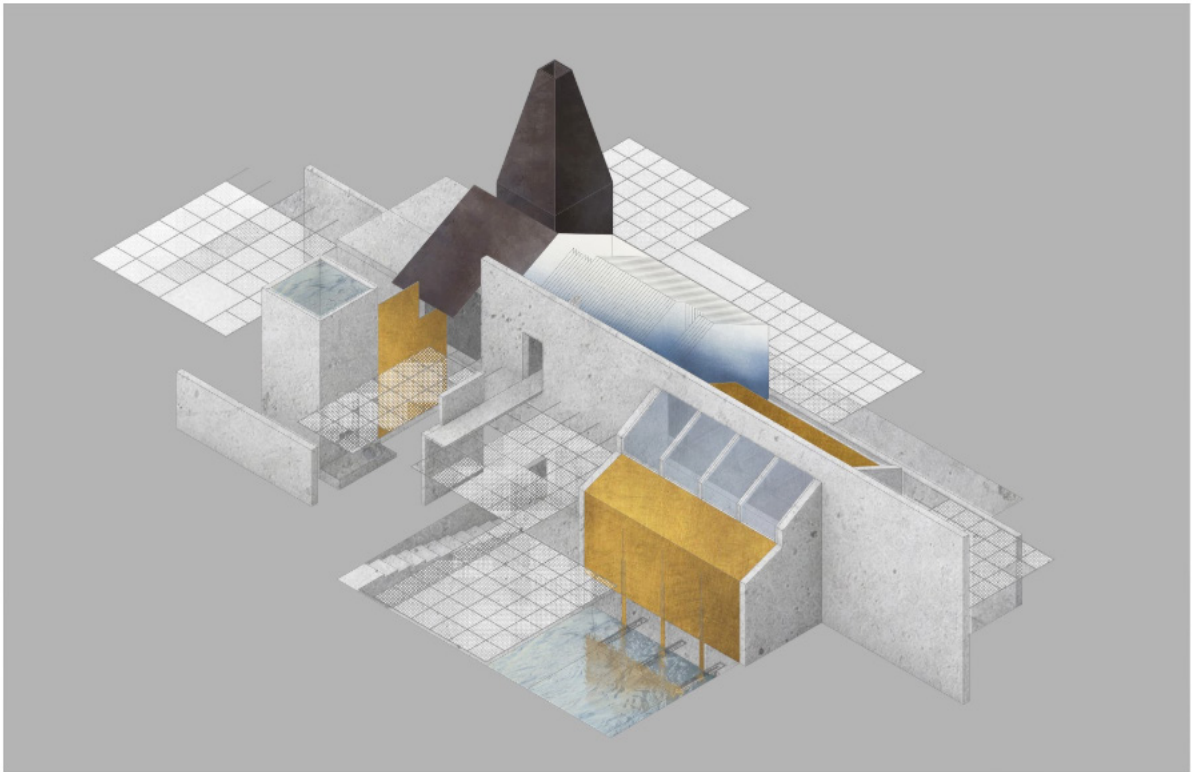
### **4.1.3. Accident House II**

The Accident House II (fig. 72) was designed to increase the complexity of these accidents and poetic collisions within the five rooms into a larger, encompassing hyper-object by merging the elements and parts of each of the five rooms into one another. This merging and reconstruction of the rooms into one unified hyper-object allows for more elaborate and complex forms of poetic collisions, a larger architectural composition out of many folds of tangible and intangible accidents. In other words, the Accident House II works as a vicarious object that encompasses all the accidents and the resultant objects within its interior, similar to onion-like layers of objects within one another. For instance, all the concepts, thoughts and the produced objects of the five rooms, the Accident House I, and the broken plaster casts coexist within the realm of the accident as separate objects which collide within the vicarious object (Accident House II).

#### **4.1.3.1. Drawing Accidents and Poetics**

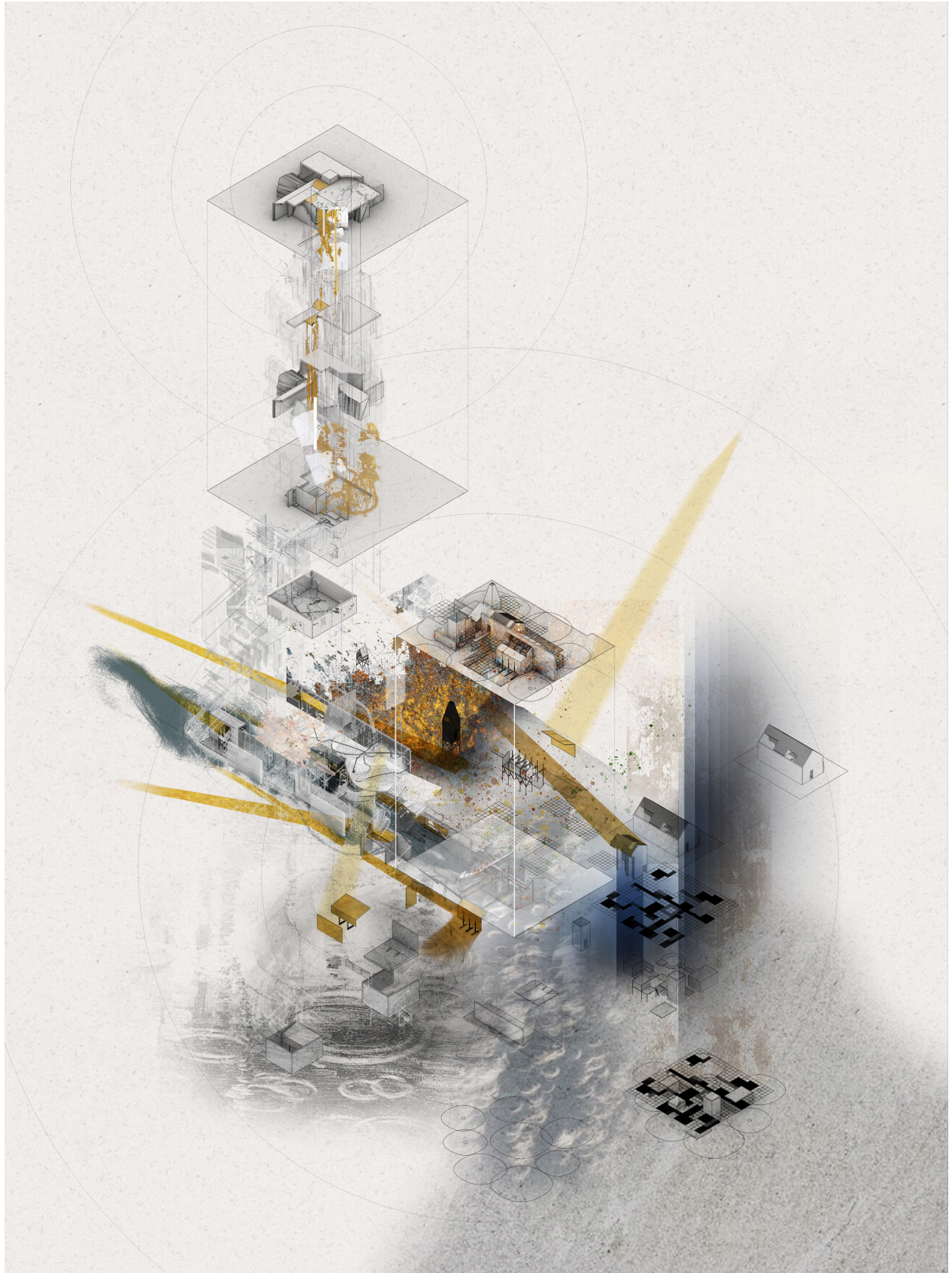
To draw and present the accidents and poetics within Accident House II, two types of action drawing methods were employed. The first drawing method is a mapping of accidents (fig. 73-75) and how objects created by the accidents coexist and encompass one another. In other words, the drawing is a mapping of the chain of causations. The second is a more atmospheric rendition (fig. 76-78) of poetics that appears through the composition of objects and the various accidents with which they are involved.





*Figure 72: Accident House II Axonometric Drawing, Kavosh Maleki.*





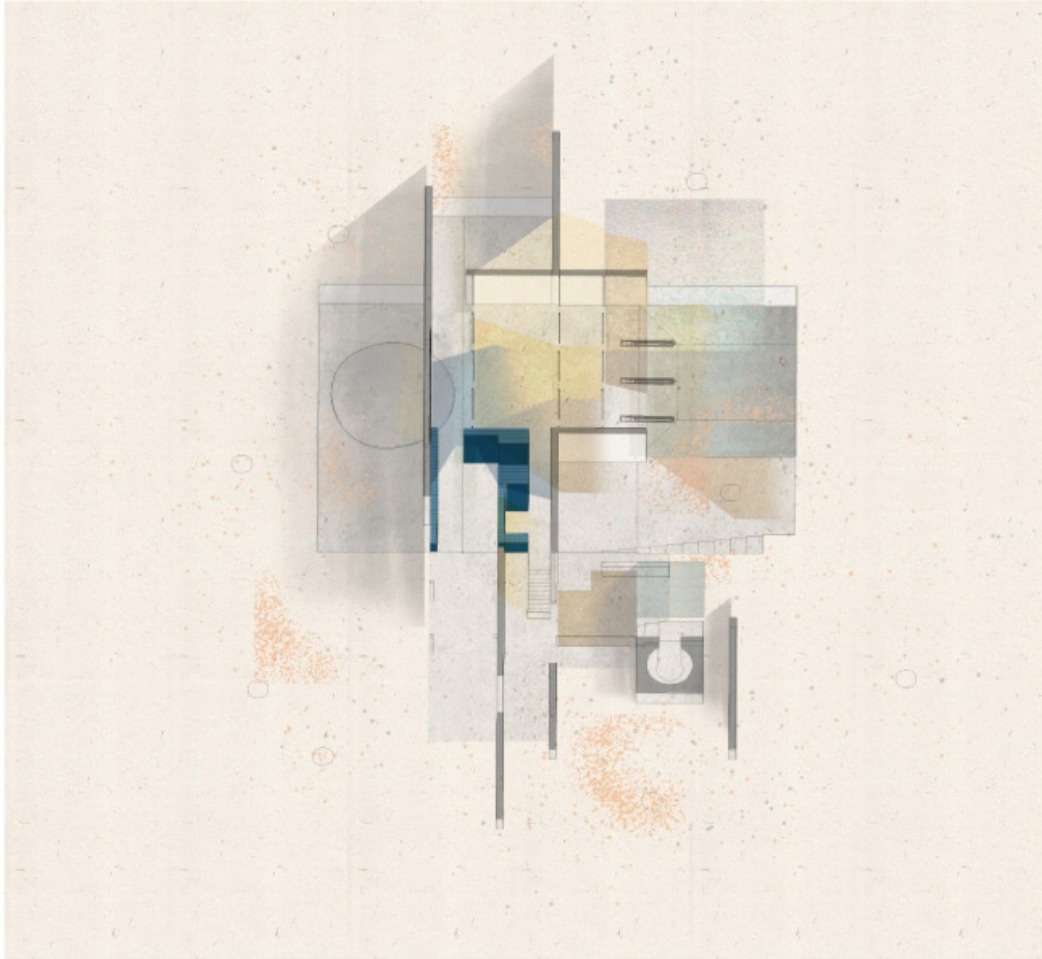
*Figure 73: Accident House I & II Mapping Accident Drawing, Kavosh Maleki.*





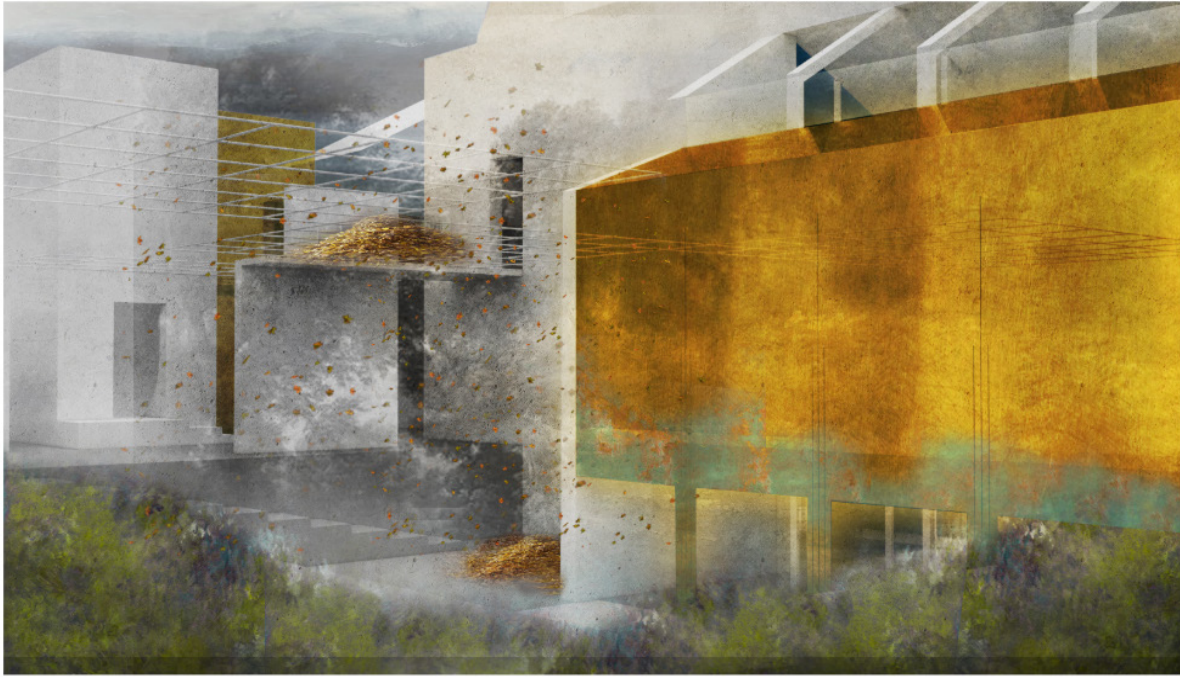
*Figure 74: Accident House II Accident Drawing #1, Kavosh Maleki.*





*Figure 75: Accident House II Accident Drawing #2, Kavosh Maleki.*





*Figure 76: Atmospheric Drawing #1, Kavosh Maleki.*



*Figure 77: Atmospheric Drawing #2, Kavosh Maleki.*





*Figure 78: Atmospheric Drawing #3, Kavosh Maleki.*



## 4.2. An Accidental Conclusion

By highlighting the telos-driven, anthropocentric perspective in the relationship of the notions of form and function within an architectural object—functionalism, formalism and the equilibrium of form and function—through fetishization of accuracy and the use of top-down and bottom-up justification of the architectural object, this thesis argues that the contingency of the world and consequent state of accident generates an accidental architecture. This disavowal from absolutism innate within the traditional telos-driven perspective and departure from the traditional perspective which can only pursue delight as a consequent product of optimization in the relation of firmness and commodity (form and function), reveals the forgotten or ignored idea of beauty removed from modern architecture's vocabulary more than a century ago.

The immense scientific and technological advancements of the industrial era changed the living conditions and eased everyday tasks through optimization of speed and functionality and brought along a progressive method of thinking. This approach towards progress through optimization of functionality eventually influenced and changed the approach towards the architecture fundamentals highlighted in the Vitruvian triad. This is evident in the influential text, *'Towards a New Architecture'*, and the obsession of Le Corbusier with the functionality of automobiles, ocean liners and airplanes and his famous statement “a house is a machine for living in”.<sup>88</sup>

This change in approach towards the fundamentals of architecture is best explained through the maxim of functionalism coined by Louis Sullivan “form ever follows function”.<sup>89</sup> As form and function replace the terms firmness and commodity as an updated and more reductionist terms, delight



becomes the subsequent product of the relationship of form and function, which in the case of functionalism is explained through optimization of function through sacrificing form. This transformation of the Vitruvian triad in the name of progress reduces the importance of delight and beauty in architecture to become a subsequent product of form-function relations. This eventually results in the fading of the aesthetic question of beauty in architecture.

This thesis argues for an accidental aesthetics through making of an accidental architecture, which is defined as an architecture that gives up on the extreme ideas and telos of pure functionalism and pure formalism in favor of an architecture that operates through various modes of ‘drawing’ architecture as an accident machine to allow for endless possibilities in the investigation of ideas, poetic interplay (metaphors), and collisions of things—any entities—to compose poetic architectural objects through accidents.

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88. Jeanneret, Charles Édouard . 1985. *Towards a New Architecture*. New York: Dover Publications. Page 107.

89. Sullivan, L. H. (1896, March 23). *The Tall Office Building Artistically Considered*. Lippincott’s, pp. 403-408.







## Bibliography

Camus, Albert. 2003. *The Myth of Sisyphus*. New York: Vintage Books.

De Zurko, Edward Robert. 1958. *Origins of Functionalist Theory*. New York: Columbia University Press.

DeLanda, Manuel. 2002. *Intensive Science & Virtual Philosophy*. London: Continuum.

Deleuze, Gilles, and Félix Guattari. 2004. *A Thousand Plateaus: capitalism and schizophrenia*. London: Continuum.

Eisenman, Peter. 1998. "Post-Functionalism." In *Architecture Theory since 1968*, by Hays Michael Kenneth, 235-239. Cambridge, Massachusetts: The MIT Press.

Gibson, James J. 2014. *The Ecological Approach to Visual Perception*. New York: Routledge.

Hamilton, Ross. 2007. *Accident A Philosophical and Literary History*. Chicago: The University of Chicago Press.

Harman, Graham. 2016. *Immaterialism*. Cambridge: Polity Press.

Harman, Graham. n.d. "On Vicarious Causation." *Collapse (urbanomic) II*. <https://www.urbanomic.com/chapter/collapse-ii-graham-harman-on-vicarious-causation/>.

—. 2011. *The Quadruple Object*. Winchester, England: Zero Books.

—. 2002. *Tool-Being: Heidegger and the Metaphysics of Objects*. Chicago: Carus Publishing Company.

—. 2009. *Towards Speculative Realism: Essays and Lectures*. Washington: Zero Books.



Hegel, Georg Wilhelm Friedrich. 1991. *The Encyclopedia Logic: Part 1 of the Encyclopaedia of Philosophical Sciences*. Translated by W.A. Suchting, H.S. Harris, T.F. Geraets. Indianapolis: Hackett.

Hendrix, John Shannon. 2013. *The Contradiction Between Form and Function in Architecture*. Routledge.

Hughes, Francesca. 2014. *The Architecture of Error, Matter, Measure, and the Misadventures of Precision*. London, England: The MIT Press.

Jeanneret, Charles Édouard . 1985. *Towards a New Architecture*. New York: Dover Publications.

Koolhaas, Rem. 2002. "Junkspace." *The MIT Press Journals* 175-190.

Koren, Leonard. 1994. *Wabi-sabi for Artist, Designer, Poets & Philosophers*. Point Reyes, California: Imperfect Publishing.

1968. 2001: *A Space Odyssey*. Directed by Stanley Kubrick.

Laugier, Marc Antoine. 1977. *An Essay on Architecture*. Los Angeles: Hennessey & Ingalls.

Morgan, Morris Hicky. 1914. *Vitruvius The Ten Books on Architecture*. Cambridge: Harvard University Press.

Morton, Timothy. 2012. "An Object-Oriented Defense of Poetry." *New Literary History* 205-224.

—. 2013. *Hyperobjects: Philosophy and Ecology after the End of the World*. Minneapolis: University of Minnesota Press.

Pérez-Gómez, Alberto , and Louise Pelletier. 2000. *Architectural Representation and the Perspective Hinge*. Cambridge, Massachusetts: MIT Press.

Plato. 2007. *The Republic*. London: Penguin Publishing Group.



Reiser, Jesse, and Nanako Umemoto. 2006. *Atlas of Novel Tectonics*. New York: Princeton Architectural Press.

Roth, Ieland M. 2007. *Understanding Architecture*. Eugene, Oregon: Westview Press.

Semper, Gottfried. 2011. *The Four Elements of Architecture and Other Writings*. Cambridge : Cambridge University Press.

Shelley, Percy Bysshe. 2012. *A Defense of Poetry, and Other Essays*. Austin: West by Southwest Press.

Sullivan, Louis Henry. 1896. "The Tall Office Building Artistically Considered." *Lippincott's*, March 23: 403-408.

Vidler, Anthony. 1998. "The Third Typology." In *Architecture Theory since 1968*, by Kenneth Michael Hays, 288-294. Cambridge: The MIT Press.

Virilio, Paul, and Sylvère Lotringer. 2005. *The Accident of Art*. New York: Semiotext(e).

Zago, Andrew. 2018. *Accident*. Art Paper Editions, 2018.



