

Anthropocene idea in modern avant-garde architecture: A retrospective discussion on Wright and Fuller

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Abstract

The idea of nature is one of the main debates in social sciences since ecological problems are firstly discussed. Recently, theoreticians in several majors claim a new geographical era named Anthropocene. It means there is no autonomous natural system left on Earth. In that perspective, the main idea behind sustainable architecture needs to be re-discussed. The aim of this article is to clarify the idea of nature in architecture before and after the new description of Anthropocene. To maintain this purpose, article uses modern avant-garde roots of architecture in the idea of nature with discussing the theoretical debates of Frank Lloyd Wright and Buckminster Fuller. The relationship between avant-garde architects' theories and designs could clarify the architectural point of view in the new possible Anthropocenic situation.

Keywords

Anthropocene, Architectural philosophy, Buckminster Fuller, Ecological architecture, Frank Lloyd Wright.



1. Introduction

Contemporary ecology is in the middle of a paradigm shift triggered by the theoretical inquiry of the meaning of nature. Recently, contemporary philosophers like Žižek, Latour and Clark joined the debate with their social scientific ideas about nature and its autonomy. The question is if there is an autonomous being other than human left as described as nature, or today human action is the only hegemonic force on Earth. Even though the answer of that inquiry has its own significance to change architecture fundamentally, the question itself is very important to re-discuss contemporary ecological architecture.

The relationship between nature and architecture is a longtime discussion. Especially right after the industrial revolution, architecture theory began to discuss about problematic urban space and generate ideas that rehabilitate or recreate it. Quickly modern architecture defines its own mission about cities that aims a safe and healthy human life. It was the theory of modern architecture to create a contemporary just civilization with changing urban space. As Howard (1902) insists in his book "Garden Cities of To-morrow", English cities in that period were unhealthy landscapes that feature homelessness, excessive density and crime. Moreover most of other western cities had similar problems. In that context, modern avant-garde architects began to share an optimism to save the society with the tools of architecture. The optimism was about the transformation of the society with modern architecture from an unhealthy society to a modern healthy one which lives in "well designed" cities.

Modern architecture's main topics on new urban space were about the interaction of changing urban life and building idea. That subject needs multiple perspectives and actions to solve about politics, architecture and technology. Consequently, "modern architect" became some kind of "avant-garde" that creates radical and pioneer political ideas, inventions, theoretical discussions and utopias for designing urban spaces for newly modernizing urban life of that period.

These are urban utopias which aim to radically change the society from the cultural roots to the smallest details on production. These utopias envisage new urban spaces that has never described or discussed before that time. Avant-garde architectural forms were generated from modern avant-garde's perspectives for the future of the society. Easy to predict, these theoretical discussions and urban utopias need to include a perspective for the nature (Anker, 2010). After all, the position of nature became one of main discussions in the intersection of architecture and urban space. For designing a "modern city", position to nature was a subject to solve. In that context, the question was what kind of action is needed to create that utopian cities; recreating the nature with "human intelligence" or naively believing that nature is originally healthy and safe for those new modern cities in the utopias of avant-garde architecture.

The ideas about nature in modern avant-garde architecture are not only a change for that period's urban landscape, but also an extensive change for contemporary architecture's relationship with nature. Contemporary architecture creates its own identity on being agree with or oppose to that periods avant-garde architecture and design the theory of architecture with the ideas which are re-discuss the avant-garde ideas and forms of early 20th century modern architecture, again and again. Consequently, modern avant-garde architecture's ideas on nature are still important for rethinking the relationship between architectural theory and nature and to form a contemporary ecological discussion in architecture, parallel to paradigm shift in the social scientific meaning of "nature".

2. Contemporary architecture and nature

Especially after the "Our Common Future" report of United Nations World Commission on Environment and Development (WCED) in 1987 that describes "sustainability" as the key factor between production and nature, architecture shifts the discipline's relationship with the idea of nature

from a more ethical and theoretical discussion to a more pragmatic one. In the report, it was clearly described, humanity is in a path that has an unsustainable relationship with nature and the end of the path is predicted as catastrophic. In this perspective of the report, contemporary society needs to react to change total human actions for a more sustainable relationship with nature. In addition to this, industrial development must not be harmed. Thus, sustainability idea describes a society that simultaneously economically growing and rehabilitate the environment for the sake of next generations. The project was simple enough to track: creating a society that spend the natural resources with the ratio of the regeneration of ecosystem. This idea quickly changes the architecture to a discipline what counts the energy and natural resources that it spends and recycle them for the reuse of the industry. McDonough and Braungart's (2002) "cradle to cradle" theory was a good example for that, which envisages buildings made by environmentally full-cycling construction materials that generates an industry with no output of waste. By the way Parr (2009) describes that kind of a sustainable architecture as a new agreement between green society and construction industry.

The new theoretical consensus after the report theorizes the relationship with nature and architecture with engineering tools like LEED and BREEAM certificates which describes environmental ratings for architectural designs with energy consumption, sustainability of the landscape, environmental quality and recycling of the used materials. These building certification systems become very popular in architecture theory and praxis. Architecture slowly changes its point of view from a more philosophical way to a more engineering way about understanding the nature (Swyngedouw, 2006). Result of this change, contemporary architecture mostly tries to understand and redesign the relationship between society and nature with an optimism to rehabilitate it with technological advancement. However, sustainable architecture's optimism is very different from their modern avant-garde ances-

tors. Modern avant-garde used science and technology for creating a design perspective and method to change the society to a modern civilization, on the contrary contemporary sustainable architecture tries to solve the ecological crisis without changing the society or economical system at all. It can be described as a rather post-modern position, an acception for the continuity of status quo.

Nearly thirty years after the declaration of Our Common Future Report of the WCED, today, ecological crisis is still one of the most urgent problems of contemporary society. Climate change researches show that last ten years of the Earth were the hottest years of the planet surface and Human actions are the main cause for the ecological crisis. Moreover, studies show that it is nearly impossible to change the situation without radical changes in the consumption habits of the society. Situation could be seen as a failure for the paradigm of sustainability (Engelman, 2012). That points out architectural point of view embedded to sustainability paradigm also becomes a question mark now. The agreement between green society and social construction mentioned by Parr seems to failed to create a sustainable future.

In the perspective of the uncertainty of the condition on ecological crisis, Latour's (2014) point of view becomes much more important for architecture. Latour reminds that ecological crisis is unique in one point: there is no outside of the problem on Earth, so evidently there is no outside of this context for contemporary architecture. In other words, being outside of this topic for architects describes a position on the context. A position that is like ignoring a metaphorical leviathan comes for crush the (human) being. Architecture needs to find a theoretical background for current ecological situation. A situation that society needs to change urgently.

3. Anthropocene idea

Even though ecological architecture follows a rather linear path in last ten years, being practical with certificate systems and consumption based preservation techniques; ecology as a sci-

ence field is experiencing a quick paradigm change. A while ago, Crutzen and Stoermer (2000) claim that, current geographical epoch, Holocene era of the Earth system is over. That means, the relatively stable nature of the planet is demolished by massive effect of human behaviour now. Today, ecological theory is in a discussion about if Holocene is over or not.

According to Castree (2014a), Holocene period began with the end of last ice age that blocks the development of human civilizations with natural barriers and emergence of natural boundary conditions that make planet surface available to the rise of human culture. Zalasiewicz et al. (2008) describe that boundary conditions as a “holocenic plateau”. Metaphorically human culture lives on that plateau which is described with the stability of sea level, global temperature, atmospheric carbon dioxide level, denudation rate and human population. As a result, Zalasiewicz et al. (2008) claim the instability of that measurements mean the end of Holocene epoch and the end of boundary conditions. Similar to Crutzen and Stoermer (2000), Zalasiewicz’s theory means a new epoch that human culture is not naturally protected by environment, vice versa environment is mainly controlled by and fragile to human actions. Crutzen and Stoermer (2000) named that new human centric epoch after Holocene as “Anthropocene” which means “human age”.

Quickly, Anthropocene becomes both a scientific and a cultural phenomenon. Different scientific works begin to clarify the new age with their own perspectives. Castree (2014a) describes Anthropocene situation as a new theoretical separation between natural and cultural. Similarly, Davison (2015) claims the autonomy of human changes its identity to the autonomy of nature. Philosophically, Zizek (2010) describes a blur between natural and cultural built by Anthropocene situation. Theoretically a new meaning for ecology could be described with the idea of Anthropocene.

Szerszynski (2012) describes the Anthropocene with the remaining of the human action rather than the actual action. In that perspective, under-

standing human action is not enough for understanding the impact. Most of the time the impact is hard to seen by the spectator of the action. That description changes the perspective of the ecological idea from the sustainability perspective to a new blurry state similar to the theories of Castree or Zizek. However, sustainability idea’s main problem is about minimizing the human effect rather than eliminating the remaining disturbance of the human action. On that account, Latour (2004) suggests to focus on politics of nature, instead of trying to solve the ecological problems with techno – ecological analysis and acts. As another suggestion, Clark (2010) defines a new green perspective to “embrace inhuman” because human is not only a creature but an “earthly creature” and the being of the human is depend upon the survival of the autonomy of the nature. On the other hand, with the definition of the Anthropocene, “a world without nature” becomes a theoretical framework which is began to discuss. As an example, Ellis (2011) describes the new phenomenon as an escape from the fear of exceed the natural limits and theorizes a new point of view that describes a full human controlled globe with artificial living systems, controlled faunas and floras. Clearly, it means a dissolution of the autonomy and originality of the nature and redeveloping it with a human oriented perspective from the size of the sub-atomic level to the ecological balance of the Earth. Castree (2014b) named this kind of pro-Anthropocene theories as “hyper-modernism” and clarifies that kind of situation with hybrid and post-human situations.

The debate on Anthropocene idea clearly offers a new perspective for ecological architecture. Though sustainability, as a contemporary paradigm, is not enough to understand the new blurry state of being in Anthropocene or not. Sustainability originally depends on an understanding of an unlimited self-rehabilitating nature whenever the disturbance of un-ecological forces and materials are reduced. Despite the fact that Anthropocene theory defines an inquiry to a possible or already occurred catastrophic total dissolution of the homeostatic act of nature.

Theoretically, architecture needs to change its perspective the newer scientific debate about nature. On that account, architectural discussion should be about the action related to the emergency of nature to an anthropocenic situation. In a perspective about the situation could re-describe ecological architecture either as a pro-anthropocenic action or an act against the anthropocenic path. Interestingly, that discussion could be retrospectively discussed on modern avant-garde architecture. Frank Lloyd Wright and Buckminster Fuller, theoretically discussed the autonomy of nature in their respective works and use their point of views in their designs. The ideas and designs of them could show the relationship between anthropocene idea and theory of architecture.

4. Wright's debate

One of the most important modern architects, Frank Lloyd Wright has a theoretical framework strictly related with the idea of nature. In his idea, nature is a "poetical" phenomenon and the relationship between man and nature could only be reorganized with a "poetical" method. In his autobiographical book "A Testament", Wright (1957) identifies his ideas about nature and man with a discussion about William Blake's poem "exuberance is beauty":

"He who knows the difference between excess and exuberance is aware of nature of the poetic principle, and not likely to impoverish, or impoverished, by his work. The more a horse is Horse, a bird Bird, the more a man is Man, a woman Woman, the better? The more a design is creative revelation of intrinsic nature, whatever the medium or form of expression, the better."

Parallel to Wright's idea about poetry and understanding the nature, Zevi (1950) describes Wright's architectural idea as "being human before humanist". As it is seen, according to Wright, "nature" is actually the intrinsic nature of the being even if the being of a human or something else. So, the idea of nature is the intrinsic nature of the natural. In the same page of his book, Wright (1957) clarifies the idea with environmental perspective:

"...man, thus caricatured by himself – nature, thus violated – invaded even national forest parks by a clumsy rusticity false to nature and so to architecture. The environment of civilized mankind was everywhere insulted by such wilful stupidity."

Wright (1957) describes environmental problems as "misconception or no conception of art and architecture". In his point of view, the problem in environment is a problem in architecture, and interestingly he identifies "the machine" as the solution of that environmental problematic.

Wines (2000), subjectively, identifies Wright as the only green architect of his period. According to Wright (1930), a modern man is a whole with his house and also the landscape. House is a part of the land, a complementary for the whole being, universe. Man–House–Nature trio defines a gradual holistic approach that describes the relationship between man and nature. Wright (1908) names the design approach as "organic architecture". It defines a pure articulation of design, manufacturing and landscape. In his book "The Future of Architecture", Wright (1953) describes his idea about house design as below:

"Human houses should not be like boxes, blazing in the sun, nor should we outrage the machine by trying to make dwelling-places too complementary to machinery. Any building for humane purposes should be an element, sympathetic feature of the ground, complementary to its nature-environment, belonging by kinship to the terrain."

That articulation could be seen in the designs of his two Jacobs houses. Wright's first Jacobs House was made by precast materials that did not covered by any finishing paint or plaster. He uses the brick walls' junction points to create a grid for elevations, on the other hand he uses a 2 x 4 feet (61 x 122 cm) grid for plan section (Lind, 1994). According to Lind (1994) project's main idea was about the need of an economical housing concept for the American middle class of the period. Wright idea was different from his co-evals. He thinks that a modern affordable house must be a new solution for the blooming modern life with stan-

standardization, prefabrication and the nature of the materials, even though his coevals try to minimize their period's house design to an affordable ratio.

Wright's second Jacobs House was different from the first house because of its semi-circular form. It uses the landscape for preventing from the winter wind of the Wisconsin and form creates a sunken court for humid summers. According to Steele (2005), the building is the first "passive solar house" in history.

Satler (1999) claims, in Wright's architecture, a design problem is pointed a sociological problem. A design is as important as how it liberated the society. In that perspective, Wright's utopian city planning project Broadacre City was grounded with that socio-technological problem. His perspective about American cities has a big role about the design:

"...social necessity had already forged a mortgage on the landscape of our beautiful American countryside while all our buildings, public and private, even churches, were senseless commitments to some kind of expediency instead of the new significances of freedom we so much needed."

Wright (1957) thinks American citizens needed to be liberated from unnatural, unliberal, land lord owned, non-modern landscapes of American Cities. Consequently, Wright identifies car and television as important technical devices that dissolve hegemonic city fabric and liberate human and space altogether. Broadacre was a project that tries to create enough space for man to create his own free relationship with being on landscape (Hall, 2002).

Wright's Jacobs Houses could be seen as early experiments of the idea of Broadacre City, so technical properties of the projects are not simple ideas about efficiency or economy but they are socio-technical experiments of settling to Earth. Man is as free as freedom of his land(scape) and he becomes the part of society with his land becomes the part of the nature.

Figure 3 : Broadacre City Perspective Drawing by Wright (Pfeiffer, 2009)

Even though, Wright's Jacobs Houses and Broadacre City, technically, are mostly old and already well known in-



Figure 1. First Jacobs house (Lind, 1994).



Figure 2. Second Jacobs house (Lind, 1994).

formation for contemporary architecture, his perspective could be a debate against an Anthropocene point of view in architecture. Banham (1969) identifies Wright's architecture as a liberation of the limits of static architecture and an approach to form a natural flow of being. It could be described as a reconcile between modern human and nature. Wright (1957) thinks native American life is more free and natural. He describes being native with being with nature:

"Our human environment may now be conceived and executed according to nature: the nature of time, place and man: native as was always natural to cultures whatever life in the past was strongest, richest and best. The level always highest when native."

After that description of being native, he begins to discuss about the nativity problem in modern man. Wright (1957) tries to solve the nature of modern man with architecture that influenced by the harmony of relationship between native man and nature:

"What is this life of ours today, is man in his new place in time? What



Figure 3. Broadacre city perspective drawing by Wright (Pfeiffer, 2009).

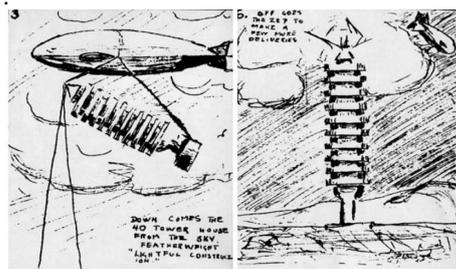


Figure 4. 4D Tower house design of Fuller (Gorman, 2005).

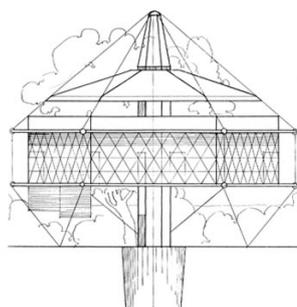


Figure 5. Dymaxion House Design Façade of Fuller (Baldwin, 1997).

kind of Man is this man of today? What of his civilization? Nature is how now? What is Man as he is? Where does this activation of life-force apply to old or new form, and what is substance as he represents it to be God or Devil? ... in short, in what does man really consist as he exists in our native civilization?"

As a result, Wright's architecture is a challenge for an ecological-democratic space that human and land(scape) liberated altogether. In his point of view, the liberation is understanding the nativity of human being on the land(scape). In his point of view, machine is only a tool of modern man for that reason. Therefore architecture is not a machine design but a poetic - sociological design that uses machine as tool.

5. Fuller's Utopia of Nature

Fuller's idea of nature is totally different from Wright's idea of nature that become a whole with mankind. His ideas were about Shumpeter's economical point of view which defends design and engineering are the key methods for overcoming economical and environmental problems (Anker, 2010). Fuller builds his point of view about changing the industrial systems upon efficiency. According to him, efficiency could be reached by not only changing the design but changing the whole system as responsive to the design.

In Fuller's book 4D Time Lock (1928), he criticizes housing industry of his age as under-developed and describes the situation with a custom car design metaphor. In Fuller's story, a man wants to buy a car, so he invites a car designer to his garden. After that man describes the design which he wants to use with the images of Venice gondolas and French fiacre (Gorman, 2005). In Fuller's (1970) point of view these kind of requests by the users are pre-industrial and inefficient for housing industry. House must be a pure efficient tool for sustainability of the individual. His method for housing design was understanding the minimum necessities to survive and consequently he portrays his house designs as a protection from the in, out and in-between variants.

Fuller's (1928) first phenomenal conceptual housing design was 4D Tower House. It was a light aluminum pre-cast building that carried with a zeppelin to the ground that "smoothened" with bombs. In his first design, landscape clearly means a handicap for creating efficient architecture and something to demolish. On the other hand, house is a monolithic pre-fabricated product that delivered to the customer. One year later, Fuller (1929) improved his idea of house with his famous design, Dymaxion House. It was also an aluminium precast industrial housing design. Dymaxion House is a hexagon planned project that could built in 24 hours. The structure of the house was a metal column at the center that carries floor and ceiling parts suspended with steel ropes (as cited in Anker, 2010). According to Anker (2010), the design

od Dymaxion House is a perfect example of the allegory of Le Corbusier: “a machine to live in”.

Contradictory to Wright’s designs that unify land and house as a whole, Gorman (2005) characterizes Fuller’s designs as temporary objects on Earth. The interaction between human and nature becomes indirect with the use of technology, human lives in a machine about efficiency. As another example for that purpose, in his book “Utopia or Oblivion”, Fuller (1972) describes a life in a capsule design that flowing between outer space and surface of the Earth:

“...once produced and successfully “operative”. Its (a rocket capsule contains a miniature artificial ecosystem and house) replicas may be mass-produced for \$2 per pound, i.e. for \$600. With such an integrated chemical-energy regenerator taking care of all sanity and energy-generating requirements of family living, man may deploy almost invisibly to the remote beauty spots about the Earth in air-delivered geodesic enclosed dwelling machines and survive with only helicopter and TV intercommunication at luxuriously simplified high standards of living-operative at negligible land-anchorage cost similar to telephone-service charges.”

Clearly, Fuller’s concept about “house” is hidden from his description about that “dwelling machine”. In his point of view, house is not about dwelling in a community or on a landscape but it is about to survive at ecological and economical conditions, “luxuriously”. Consequently, the theoretically base of his projects are technological abilities instead of an interaction with community or nature. When the starting point of the project becomes the technological abilities, the project needs to be a part of a greater technological network. This point of view was well-explained in Fuller’s (1968) famous book named “Operating Manual for Spaceship Earth”. He describes the situation with the evolution differences between human and other kinds:

“What nature needed man to be was adaptive in many if not any direction; wherefore she gave man a mind as well as a co-ordinating switchboard brain.

Mind apprehends and comprehends the general principles governing flight and deep sea diving, and man puts on his wings or his lungs, then takes them off when not using them. The specialist bird is greatly impeded by its wings when trying to walk. The fish cannot come out of the sea and walk upon land, for birds and fish are specialists.”

According to Fuller (1968), the problem of sustainability is specialization of the body of bird or fish to a one specific purpose. Contrast to specialization, design must be generalized with the efficiency and adaptability of the whole system. In this integrated perspective, Fuller (1968) describes a design as a growing child. How a child’s body does not need an instruction for growing, design must be emerged with the growing of technology and the sociological system. That metaphor directs him to the idea of “Spaceship Earth”.

Odum and Barrett (1971) describes a closed ecosystem as a system that does not interfere to another system. Similar to that description, Fuller (1968) designs his point of view with the idea that Earth is a closed ecosystem, metaphorically similar to a spaceship. Therefore, on Earth all the people are astronauts of Spaceship Earth. People are responsible to the Earth as astronaut is responsible to the spaceship. Fuller (1968) discusses that responsibility as a mission to a “metaphysical mastering”:

“If the present planting of humanity upon Spaceship Earth cannot comprehend this (ecological and economical) inexorable process and discipline itself to serve exclusively that function of metaphysical mastering of the physical it will be discontinued, and its potential mission in universe will be carried on by the metaphysically endowed capabilities of other beings on other spaceship planet of universe.”

The metaphysical mastering in the theory of Fuller is some kind of a pursuit to evolutionary completeness. In this pursuit, technology has a nearly mythical role as a guide. Fuller (1964), in his book “Education Automation”, mentions physical and technological knowledge as “eternal principles” which are the main factors on how year

2025 will be:

“We humans were given this capability to function as local Universe problem solvers. We are here to solve evolutionary occurring, unprecedented, metaphysical, as well as physical problems. We can do so by means of our unique access to the thus-far discovered inventory of eternal principles.”

As a consequence, human mind is not only responsible for surviving or protecting the Earth but also responsible to change it with the eternal principles. However, Fuller (1968) thinks that like as limited thermodynamic knowledge is enough for being an astronaut; only limited technical knowledge is needed for being an astronaut / citizen in “Spaceship Earth”. In Fuller’s (1968) description Spaceship Earth is a kind of machine:

“One of the interesting things to me about our spaceship (Earth) is that it is a mechanical vehicle, just as an automobile. If you own an automobile, you realize that you must put oil and gas into it, and you must put water in the radiator and take care of the car as a whole.”

Thus, in the perspective of Fuller, people needed to obey the operating manual of Earth written by engineers and architects. On the other hand, that kind of mechanical Earth is open for “upgrades” to the “metaphysical mastering” of human from the engineers and architects who know the “eternal principles”. Actually, Fuller (1964) describes that kind of a techno-centric democracy utopia which architects and engineers calculate the prospective results of the decisions of the community for a right for citizens to change them.

6. Wright and Fuller’s ideas in anthropocene perspective

Even though, sustainability idea in architecture is mainly about energy and material efficiency, especially after the description of the Anthropocene era, ecological theory mainly focuses on dependency, resilience and autonomy of natural systems on Earth. As Latour (2014) mentioned, the “story” about the Earth is in a challenge between man and nature and now nature threatens the mankind with withdrawing the challenge. As a result an ecolog-

ical idea in Anthropocene perspective is about the idea of nature, its state and the socio-ecological idea about it. Wines (2000) describes ecological architecture as an architecture of an ecological society. Both avant-garde architects, Wright and Fuller are consistent to this idea. They aim to find environmentally consistent societies for new relationships with nature in their respective utopias. For both of them, technology and design are tools for shifting the design paradigm and sustainability of the contemporary system is simply not important. Their utopias are inclusive ideas that aim to shift point of view on every single aspect of design. In the perspective of their utopias, architecture is responsible to the life in universe as a whole.

According to Wright, there is a hierarchical dependency between man, land and nature, so that being consistent is about being in harmony with the origin of the universe, earth and finally landscape. In the point of view of the contemporary ecological debate that could be said, he describes his theory as a holosenic dependency that protects the autonomy of both human and nature. On the contrary, according to Fuller being consistent is creating a harmonical design from the minimum scale to the scale of the whole economical system. It points, Fuller understand nature as ground for a more important economical level in his theoretical background. A consistent economical system and the individuals living in that economical system are the key factors of the sustainability of Fuller’s architecture. In Wright’s architecture man and universe are a whole that free from any requirement of a system, so that there is no sustainability in the idea of Wright because there is no system to sustain at all. There is only the poetic relationship between man and nature.

Wright clearly thinks man is permanent on the land(scape). Design and construction are about the settlement of the man to the land(scape) with his house. Thus, a house design is only relevant for the original owner and the original landscape. A house is a (human) nature to live in. In Fuller’s perspective, system and the efficiency

of the design are stable, house and man are temporary. House design is for an anonymous man and not for settling to the landscape but for escalating on a ground. However his idea simply did not answer what is happening about the leftovers from that temporal escalating.

Even if, theoretically Wright seems like more conservative to radical interference to the landscape; other than the destructive bombing idea for “smoothing” in 4D Tower House project, Fuller nearly never touches the landscape at all in his projects. For example, in Wright’s projects roof of house could be soil, garden, nature in the composition of man and landscape but in Fuller’s perspective nature is a fragile machine that ordinary people should never touch or be a part of. So that, in Wright’s utopia, man and land are collaboratively liberated from status quo of pre-modern life which man is forced to live as either a villager or in a city without any interaction with nature. On the other hand, Fuller’s man is liberated from the land with techno-economical design and when he liberates himself, he loses his rights about interfering to the being. The mankind is astronauts now.

As astronauts, according to Fuller, nature of human is his minimum requirements to live: eating, sleeping, excretion etc. The life is a technical problem. A technical device is important as solving economy and efficiency problems in life. In Wright’s perspective, life is a socio-psychological phenomenon. In the virtue of that, nature of man is originally the identity behind his social and psychological actions. For this kind of a point of view, technical device is important as it liberates the owner’s identity from hegemony in society and land. A similar perspective difference could be seen in these two modern avant-garde architects’ ideas about nature. When Fuller compares design as a growing child, the design phenomena he mentions also includes nature and even the whole universe. If his two metaphors could be combine in a weird example: a spaceship growing like a child, there is no outside of the design from the beginning till the end. It has a very specific purpose as

a spaceship and an organic closeness like a growing child. In Fuller’s metaphorical world, an arm is a technical device which has a purpose even it is an arm of a child or an arm of a factory robot like in an anthropocenic world the originality of the nature of the arm is not a question. In Wright’s world, the idea of nature is the catalyst of the design, a landscape is the ground that the human-story needs to be on it. Even though the landscape could be changed, nature keeps its identity as it is, so that a child’s arm is not a device but the being and its technical specificities are only important with the very own story of the metaphorical child. It is open to the being but also needs to be protected in the same time like the openness and the protection of the nature in his theoretical perspective.

The blurry state of Anthropocene which Zizek (2010) mentioned, includes unpredictability and incomprehensibility inbetween nature and mankind. Interestingly, Latour (2014) mentions nature “take the control” in the exact moment of withdrawing from the challenge. In that perspective, He describes the blur and the unpredictability of possible ecological catastrophe as a “geo-story” and suggests two options for a solution to the ecological crisis. The options he suggesting are; a new total anthropogenic “human-story” and a limited, ecological autonomy preserved “human-story”. In spite of a geo-story that limits human action with unpredictable natural disasters, an ecological autonomy preserved human-story is accepting the capabilities of the stability of nature and limit human action on it. By the way, an anthropogenic human-story is totally diminishing the stability of nature and creating an anthropocenic stability on Earth. In this context, the question is which of these avant-garde architects’ approaches meet which of the stories. Fuller’s utopia seems like an anthropocenic human-story that stability is constructed with technological devices. On the other hand, his point of view about the fragility of system creates a new status quo for the culture and becomes the main problem about human nature. On the other hand, Wright’s utopia is the other, autonomy

Table 1. Ecological and architectural subjects in Wright and Fuller's perspective.

	WRIGHT	FULLER
Earth	the land(scape) that human live	a planet that human could reach metaphysical mastering
Nature	the intrinsic and poetical autonomy of being	the ecological analysis of the being
Design	come out of being native	come out of the system created for economical survival
Technology	a tool for design in the pursuit of the "freedom" of nature and man	the design paradigm come out of "eternal principles"
"Human Story"	an "earthly" human uses technology for the mutual autonomy of humanity and nature	a hyper modern human who push the limits with "eternal principles" on Earth or somewhere else

preserved human-story. In his utopia, nature is autonomous with the man. However mankind did not limit themselves with the capabilities of the nature or push the limits of the nature to find the solution but shifting the limiting paradigm. Consequently, design and technology are not tools for pushing the limits but tools for dwelling to the land(scape) and changing the paradigm that disturbs the autonomy of man or landscape and dominates the being. The difference between the ideas of Fuller and Wright is the autonomy of nature. While Fuller envisages an utopia that nature controlled by techno-centric human systems, Wright's sociology oriented utopia creates an architecture that respects the originality of the relationship of man with autonomous nature. Fuller's technologically controlled system and Wright's sociologically controlled land creates the main question marks between the new theoretical perspective in ecological architecture in the Anthropocene era.

7. Conclusion

Wright and Fuller's utopian approaches create an alternative way of thinking for contemporary architec-

ture. Today, architecture faces a new challenge in Anthropocene era and a definition of the situation is needed for architecture that described by the theory of architecture. Zizek and Latour redefines the situation in philosophy with the hints of the idea in geographical theory. Their philosophical definitions are different than the geographical definition because of the idea "there is no nature now" is too much certain for the meaning of nature in the philosophical point of view. Architecture also needs to find out its own meaning in Anthropocene. Perhaps this meaning is hidden in the questions of "what is the ground without the meaning of nature?" or "what is the nature of the architectural space in Anthropocene?" now.

Wright and Fuller's utopian ideas are free from their contemporary society's rituals and explores the potentials of being in the very natures of mankind, landscape and matter. One way or another, they are both radicals for the idea of nature and their designs are the experiments of that avant-garde natural utopias. Contemporary ecological architecture needs to be critical and free in a that kind of perspective, even

it becomes dilemmatic. Zevi's (1947) description of "human before humanist" is important today. Architect needs to be choose between becoming an "earthly creature human" or a "hyper modern humanist". As Latour (2014) mentioned, there is no outside of the problem now.

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