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Theorizing Folded Geography in Architectural Design: Experience of Cappadocia

Mimari Tasarımda Katlanan Coğrafyanın Kuramı: Kapadokya Deneyimi

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ABSTRACT

This study defines the phenomenologies of Cappadocia in design practice and strategy and attempts to understand how the atmosphere of Cappadocia can re-emerge through specific design concepts in student projects in Design Studio 5. Cappadocia GEOFOLD is based on a new approach in architectural design toward the dynamics of space between humans and nature and the changing balance between them. It aims to acquire and improve upon what is natural and to unfold as a pattern in place. It comprises three phases: Experiencing the Place, Diagramming the Geography, and Mapping the Diagrams. Computer logic is used as a strategy when carrying out these phases in the studio. The aim is to produce a network of relationships strong enough to have a logic of flow, with differences depending on vectors and incorporating variation without distorting internal consistency. Cappadocia GEOFOLD is a phenomenon in which the parts lead to the whole and are defined in terms of intricate links/relations. The final form is carefully considered and important in terms of the relations between these phenomena. These relational forms are defined as connections and configurations of points, either with each other or with sequences of events, together with their distributions. Thus, the design process operates as a dynamic model, opening new ways of creating and thinking as well as engendering unexpected ideas.

Keywords: *Architectural design; diagramming-mapping; phenomenology.*

ÖZ

Bu çalışma, Kapadokya'nın fenomenolojilerini tasarım pratiğinde ve stratejisinde bir atmosfer oluşturucu olarak tanımlamayı ve bu atmosferin Mimari Tasarım 5 stüdyosunda öğrencilerin kendine özgü tasarım konseptleri aracılığıyla nasıl yeniden ortaya çıktığını anlamayı amaçlamaktadır. Kapadokya GEOFOLD, yeni bir mimari tasarım yaklaşımıyla insan ve doğa arasındaki mekan dinamikleri ve bunların değişen dengesine dayanmaktadır. Bir model olarak ortaya çıktığı yerde doğal olanı geliştirmeyi ve elde etmeyi amaçlar. Üç aşamadan oluşur; Yeri Deneyimlemek, Coğrafyayı Diyagramlaştırmak, Diyagramları Haritalamak. Bu aşamalarda bilgisayar mantığı mimari tasarım stüdyosunda bir tasarım stratejisine dönüşerek manuel olarak kullanılır. Bir akış mantığını, vektörlere bağlı olan farklılıkları ve iç tutarlığı bozmadan çeşitliliği birleştiren ilişkiler ağını amaçlar. Kapadokya GEOFOLD, parçalardan bütüne, karmaşık formlar ve ilişkiler olarak tanımlanan fenomenlerdir. Form, bu fenomenler arasındaki ilişkiler bakımından düşünülür ve önem kazanır. Bu ilişkisel formlar, noktaların birbiriyle bağlantısı ve konfigürasyonları veya dağılımlarıyla birlikte olayların dizileri olarak tanımlanır. Böylece dinamik bir modelle oluşturulan tasarım süreci, beklenmedik düşünceleri yaratma, düşünme ve dönüştürme yolunu açar.

Anahtar sözcükler: *Mimari tasarım; diyagram-haritalama; fenomenoloji.*

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Introduction: Towards an Eco-Phenomenological Design

Passing from sensation to thought is a complex process that contains numerous intermediary steps. Modeling and theoretical thinking are the most important stages of the journey from abstraction (concept) to reality (practice). Biological and social systems are similar examples of complex processes, with millions of parameters in mutual interaction. The interaction of opposites is the source of all movement at the core of these complex systems, and a balance between opposites becomes possible only in a limited space-time, and even then only partially and approximately. Neither can a full balance be achieved, nor can there be a situation of mutual destruction. Topological information, in a relative rather than a definite sense, is required to describe spatial relationships of complex systems in a geometrical way. In topological geometry, relational structures are defined based on measures of the object such as the number of edges, corners, and points. In topology-based designs, it is fundamental to establish the relational logic between shapes within formal configurations.

Detailed knowledge of the characteristics and relationships of this process is fundamental to dynamic design. Design of this kind leads us to understand modeling as a composition based on what is observed. The model's success lies in specificity of its abstractions and the essentiality of the characteristics reflected from the examined phenomena. Modeling helps to fill gaps in knowledge and reveal new abstractions of phenomena, in turn reflecting unknown characteristics of their behaviors and structures. The objectification of the abstract in the model is defined as its materialization or realization. Both modeling and scientific theory are necessary for the practice of experimental knowledge. The model becomes limited and infertile without the theoretical underpinning of a system of laws. It is a complex process to formulate these laws in the abstract. Thus, concepts are needed to reflect the outside world as copies and images of reality. Direct or indirect use of these concepts must clearly show the characteristics and relations indicated by them. In this manner, they correctly reflect what is observed.

Those who disregard reality and draw a line between logical and experimental methods distort and diminish the real and complex characteristics of the learning process. Observation by way of sensation and recognition of a dynamic relationship with the phenomenon under examination is fundamental to learning the basic characteristics of a thing. The sensory knowledge that emerges from active interaction is conveyed by diagrams. At this point, theory constitutes specific forms of practice and process and produces knowledge. This practice includes topological knowledge and heuristic methods broadly dependent on phenomenologies.[1] Currently, we have ample opportunity for approaches to teaching that emphasize the dynamic relationships between the single phenomenologies of pieces. The phenomenological practice of bracketing clichés and describing experience effects change by bringing people face-to-face, encouraging understanding, and generating knowledge through practice.[1]

Striking a balance between human and environment, feeling and thinking, and experience and theory is essential whenever there is a desire to plan or understand a new geography or ecologically appropriate and socially pluralistic environment. Experience is opened up to people through reading the layers of past and present. As emerges from these layers, human and nature are important transformers of geography. Cappadocia/Ortahisar was chosen as the project area, and a trip was organized there. This was because the transformations of physical and cultural geography are readily observable and the balance between nature and human can be easily appreciated. Cappadocia is a special place where people can experience the influence of topography and the forces of nature on geography, thus creating the shock of exploration. Ortahisar is a place in the Cappadocia region that is not completely open to tourism, and local people still have a close relationship with agriculture. Thus, experiencing the past and present of the physical and cultural environment may be beneficial for the region's future.

In this context, our aim is to develop an ecological design approach that includes experience and sensation. Experiencing the chosen place through the unique atmosphere of its physical and cultural parameters and integrating them as contributing factors in the design process is a fundamental principle of the Architectural Design Studio 5. This approach emphasizes the necessity of creating and observing the relationship between a place and its specific characteristics. Thus, the trip organized in the context of Cappadocia GEOFOLD stressed experiencing the place with a phenomenological perspective. Our research seeks this kind of space by asking the following questions;

- What phenomenologies of Cappadocia constitute special characteristics of geography for design practice and strategy?
- How does the atmosphere of Cappadocia re-emerge through the specific design concepts of student projects in Design Studio 5?
- How could the theoretical concepts of Cappadocia GEOFOLD be combined with design principles from an ecological perspective?

[1] Norwood, 2018, p. 21.

- What kind of designs can emerge from materializing different experiences through the same design strategy?
- What exploratory tools for design strategy does Cappadocia GEOFOLD provide?

Theory: Dialectics of the Folded Geography

Modern technology and culture are better suited to perceiving the complexity of self-organizing spatial systems that evolve through internal regulatory mechanisms, as they tend to work with information on external forces and effects.[2] Algorithmic representations supported by new technologies, new dialectic flows, and the logic of forces expressed with vectors can be considered ways of breaking taboos. The science of geography has long been interested in features of location, direction, distance, and characteristics of the earth. A landscape presenting a context of gradient slopes enfolded into new shapes necessarily implies a geological time-scale of formation. Although the terrain appears static at any moment, its form is the product of long historical processes of development. Contemporary geographers have extended the subject to the spatial effects, orders, and interactions of geological phenomena. Geography includes both actual and virtual forces. The relation between the actual and the virtual creates a dialectic based on a set of relationships unique to each location, which includes interactions in material processes. The understanding of these actual and virtual forces within a dialectical perspective should be the first step in Design Studio 5. The hidden elements of topography, such as materials and climate, have a meaning for architecture that extends beyond form alone. Thus, the design process does not start with an inquiry about programmatic relationships. Rather, it aims to represent these actual and virtual forces visually, forces that are dependent on the movement of nature itself and on the subjective insights of students derived from nature. Accordingly, a new topological formation emerges from topography, and the program implicitly infiltrates this topology. This new approach offers a deeper comprehension of topography and nature in studio education in contrast with the strict classical consideration of topography in terms of contour lines.

Accordingly, the concept of a universal and unchangeable space-time cannot be considered to be adequate. Such a space-time concept includes unfolding, which necessarily involves increase and growth. Unfolding[3] surfaces offer new possibilities to create space. Different kinds of phenomenology and information about the environment play important roles in the discovery of new possibilities from unfolding surfaces. As the second step of Design Studio 5, unfolding becomes a method for manifesting previously defined relations and experiences. It is also possible to describe the condition of oriented surfaces, as elaborated by Paul Virilio, in terms of oblique movement. At this point, the informational time space, which relates to the spatial impact of simultaneous interchange of bits of information, provokes greater instability and informality in our understanding, thus catalyzing the assimilation of the constant interaction of impulses and stimuli. These characteristics also reveal the uncertain, heterogeneous, and paradoxical conditions of the scenarios under which that information operates. They also show, however, the open and unencumbered parameters of the devices, structures, and geometries or configurations that link this information.[4]

Configurations that create knowledge can be enhanced and interpreted through computers. As they work on the basis of coordinates, computers allow great sensitivity and precision. Students can thus encode their unique information and individual sensations geometrically in the form of a layer or diagram. Points and vectors allow configurations that create a topology, with additional information being controlled through layers. It thus becomes possible to write geometric codes manually. Such a process creates new knowledge each time, with a unique set of rules, thus permitting everyone to act creatively. According to Lynn,[5] there are three fundamental properties of organization in a computer different from the characteristics of physical media such as paper and pencil: topology, time, and parameters. These three properties merit discussion, beginning with the principles of topological entities, continuing with the implications of topological forms for the relationship between time and shape, and concluding with a discussion of the statistics and parameters that can be stored in these timed surfaces. The layers indicate the vector space that allows the folds to open. These vector spaces and layers represent a reality prior to transformation. In this transformation, DeLanda[6] proposed the concept of mesoscale to investigate the characteristics of processive time. Two obstacles must be overcome to investigate space on a mesoscale: reductionism and holism. Consequently, the integrity of a system or community can be understood as an emergent property. This system carries the danger of being lost when subjected to reduction unless it is understood to be the result of interactions between parts. Therefore, the assumption of holism is abandoned and dialectical relations between parts are examined in Design Studio 5. Thus, the system is protected from any danger of being lost.

Emergent properties can be understood better in terms of increasing experiences. According to Seamon,[7]

[2] Kwinter, 1992, p. 164.
[3] Vyzoviti, 2003: 132.
[4] Gausa, 2003, p. 344.
[5] Lynn, 1999, p. 20.
[6] De Landa, 2006, p. 127.
[7] Seamon, 2003, p. 49.

a critical analysis of the design process is required to ensure the priority of phenomenological experience, which determines relationships with complexity and development. In this context, failure of communication and the attraction of geometry are end in themselves. The full characterization of the phenomenological experience depends on the arrangement of the relevant semiotic data. This approach emphasizes the importance of the material world in the characterization of human life, as people live mostly in this physical, material world. A chief objective is to research and interpret this mutual relationship through behavior, experience, and meaning as it is happening in our daily life.

As Jameson[8] indicated, although phenomenological experience is often understood as an attempt to describe how a thought is, it is also an attempt to describe how a thought feels. It aims to define a mental process corresponding to the content in all temporal specifics instead of creating expressions of that content. Realization depends on the shock or failure of the reader rather than logical proof. In fact, the shock of this reaction is the basis and origin of the dialectic. It is impossible to reach a conscious and dialectical relationship without this moment of transformation, the first deliberate transcendence of the earlier, more naive situation. A multitude of given, explained, accomplished, and unpredicted connections and associations have the latent power to make possible the creation of a new geography. Consequently, it is expected that students will transform their first moment of shock during the trip into a consciously defined dialectical relationship in the design studio, leading to a new geography.

Praxis: Layers of Experience

In light of this theoretical knowledge, a method has been developed in the Architectural Design Studio to investigate contingent structures of spatial organization in terms of differences such as form-formless, non-computable-computable, and static-dynamic. In this context, the formal transformation of the design system is considered to be a dynamic process based on the operation of forms and information rather than the form of a moment. During this dynamic process, if there is any hesitation, it is possible to revert to diagrams of information encoded by mapping. This is also a new creative process in architectural design strategy, which has the potential to reveal what is possible rather than what is already known. While the dynamics of the relationships among geology, topography, human, and geography are investigated through the concept of eco-tourism in Architectural Design Studio 5, the possibility of applying these dynamics to the urban life and space is questioned in Architectural Design Studio 6 through the design of a metropolitan transfer station. The method of mapping that establishes the mathematical model provides an opportunity to turn the process into an experiment engaged with reality. The production of models is an instance of the use of both computer technologies and the basic principles of design based on evolutionary strategies.[9] Cappadocia GEOFOLD is based on a new architectural design approach to the dynamics of space between humans and nature and its changing balance. It aims to acquire and improve what is natural and to reveal underlying patterns. The evolution of the design process comprises three phases:

Phase 1. Experiencing the Place

Phase 2. Diagramming the Geography

Phase 3. Mapping the Diagrams

Phase 1. Experiencing the Place

The renowned landscape of Cappadocia is a result of the strong interaction of nature and history, the combined forces of which have created the main characteristics of the region. Sixty million years ago, when the nearby massif folded upwards, towering volcanoes arose. Ten million years ago, three of those volcanoes erupted, covering the entire area with a thick layer of lava. This, mixed with ash and sand, along with the occasional layer of basalt, formed a high plateau. After a strata of soft tuff hardened, wind and rain took the next step in creating this geological wonderland. For many thousands of years since, erosion has been the primary force of change, continually transforming the face of the area.[10]

A phenomenological place is an environment experienced by the body, and particular conditions, events and actions are involved in the body's perception and sensation, contrary to the scientific approach of geography that sees the world as a background to be analyzed. According to modern geographers, the concept of body is insufficient, so they offer the concept of "flesh"; a body engaged with place, spanning boundaries beyond the visible through life experiences, feeling, perceiving, and producing meaning as a result of sensations and re-defining the world:[11] "Flesh is diaphanous, the sheer transparency that feels the contours of every context, register it and expresses the consequent values." It is diaphanous because it is open to the effects of the outside world. All the data coming from the external world can echo inside this body, and all spatial experiences and produced

[8] Jameson, 1997, p. 261.

[9] This evolution gives opportunities for the mathematical production of interactive patterns with complicated geometries due to the topological and parametric spatial relations and for treating the transformation from the urban scale to the building scale as a design problem (Özgencil Yıldırım et al., 2011).

[10] Kopp, 2002, p. 3.

[11] Grange, 1985, p. 72.

meanings and understandings emerge from this echo. The body is the venue of sensation, feeling and evaluation. Producing meaning from the echo of experienced place entails the establishment of relationships and encoding them. Pheonomena appear directly in space and time, and it is important to apprehend place with experience to create better worlds.

Experience starts with sensation. Sense and impression are the first steps in producing knowledge. Sensation depends on practical action.[12] In the context of practical action, there have been readings[13] and discussions on different methods for coding the knowledge of sensation, along with sketching, diagramming, conversations with local people, and videos/photos taken during the trip. The program of the trip to Ortahisar, Cappadocia was as follows:

- Italo Calvino's Cosmicomics (Perec, 2016: 128-129): First night at the cafe, September 14, 2017
- On straight lines, Laurence Sterne's Tristram Shandy, chapter 240 (Perec, 2016: 130): Ortahisar Castle, September 15, 2017
- Dimensions (Perec, 2016:131-134): Ortahisar Castle, September 15, 2017
- Playing with Space (Perec, 2016: 135-136): Ürgüp, September 16, 2017
- Mekanın Fethi, 1. Raymond Roussel's Walking House, 2. in the Atelier of Saint Jerome and 3. Fugitive "You see a bridge running four" Jacques Roubaud, 4. Matches (Perec, 2016: 137-141): Uçhisar Castle, September 16, 2017
- Inexperienced place, Space (continuation and final) (Perec, 2016:142-145): Göreme open-air museum, September 16, 2017

The importance of layering is emphasized, and assumptions are avoided throughout the trip. Students focus entirely on information from real life and collect whatever is necessary to create relationships between layers (such as topographical data, the direction of sunrise/sunset, vegetation, shadows, paths, the width of roads, and other measures) instead of mixing them. As an exercise preliminary to creating a design purpose and choosing a specific place for design, discussions occur about the moments in which the mind apprehends something special in a place. The aim is to understand space through the motion of the body, how topography affects this motion and the feel of the place, and how knowledge of place is reached directly rather than via representation.

In this context, the trip itself becomes a workshop with active discussions and special/natural geography, allowing students to develop their spatial imagination and sensitivity. It is expected that they will perceive what is invisible through layered knowledge and determine the dialectical relationships between nature, topography, and human by way of sketches and diagrams. Sketches become a tool, representing a subjective approach to the stage of spatial sensation. The phenomenological approach is found in the emergence of categories by intuition that await understanding.[14] Places for designs are chosen by students based on their specific experiences. Thereafter, the process of diagramming becomes a tool in terms of layering, an objective approach built up through experience and re-evaluation. Thus, experiences are expected to be specific; that is to say, experiences that are general, a priori, or for all of time or space carry no meaning at all.

Phase 2. Diagramming the Geography

Knowledge of place includes topography, and knowledge that transforms topography comes from nature, such as the courses of sun and wind, the locations of trees, angles of view, and routes both above and below ground. The Cartesian grid created for examining the measurements in an architectural program turns into one that includes environmental data flows. Each diagram corresponds to a specific layer of the environment. For the architectural program, a quotient is established to control measures between different functions (e.g., twenty units for accomodation + three units for eco-education studios + restaurant + multi-functional hall). Through diagrams, representation stretches beyond the real.

As noted by Oxman and Oxman,[15] the overlap between the domains of thought and action, which seem separate in the context of representation, simultaneously gives priority to the diagram. This is because it carries information in the most abstract mode, relative to the communication means and methods preferred in representing the environment. What is remarkable about the development of these diagrams in today's representation environment is the fact that they depend on information and communication theory and reveal the processes underlying them. Indeed, software iteration linked to the input of certain information, when animated, provides a map that is neither quite "mental" nor purely iconic, a map that can be manipulated at will to produce other maps.[16] The process of the design studio serves to establish relationships between scenarios that emerge with the number of layers. Diagrams include knowledge that may encompas a whole site area. Consequently, this is topological knowledge that transforms Cartesian geometry. A diagram, as an example of topological knowledge, is both a layer and a tool for discovering

[12] Özgencil, Yıldırım, 2017, p. 76. [13] Perec, 2016, p. 128-145. [14] Jameson, 1997, 328. [15] Oxman and Oxman, 2010, p. 18. [16] Vidler, 2006, p. 26.

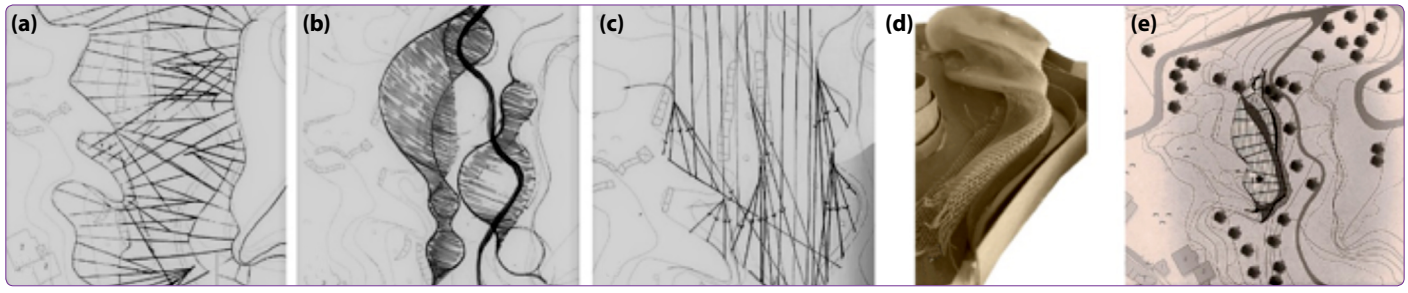

Figure 1. (a) Topography with Slope. **(b)** Topography with Void-Solid. **(c)** Topography with Wind. **(d)** Modelling the diagrams **(e)** Site Plan Source. Designer/Student Hasret Gül Atmaca.

different characteristics of a place that contribute to atmosphere. It provides insight into the atmosphere of a place, both constiuting and transforming it.

The atmospheric coordinates are considered as spatial sequences in the context of topological meaning. Sequences question conventional architectural modes of representation (plans, sections, axonometry, and perspectives) and offer a new order for experiencing space, events, and movement.[17] It is a notational system that is visualized so that every situation recorded in diagrams can be perceived and understood in the process. Thus, the geometric features of each linear narrative emerge through diagrams; the force of every line formed causes it to be grasped as a factor in a smooth mixture. Lynn[18] described two characteristics of smooth mixtures: they are composed of disparate unrelated elements, and their intensities become more complex as external forces are exerted upon them jointly. They are intricate and link local surfaces of elements with one another by negotiating interstitial rather than internal connections. These smooth interfaces are interconnected through the multiplying diagram and its different layers of reality. These layers and their living characteristics transform all representation tools into a smooth area. Time changes linear static relationships into synchronic smooth interfaces through the process of creating a diagram. This means that the diagram is neither a set of relations between forces nor a place but rather "a non-place" describing the place itself.

The design process renders the concepts of space, program, and function virtually by adding unexpected situations. Truth emerges from the virtual through the diagramming of the unexpected beyond functional needs and the representations that the mind seeks to create. In a sense, this means that representation is not metaphorical or symbolic but a cartographic and diagrammatic language that produces knowledge.[19] In the context of the diagrammatic language of geometry, it is possible to connect a topology that establishes knowledge directly to reality or rather

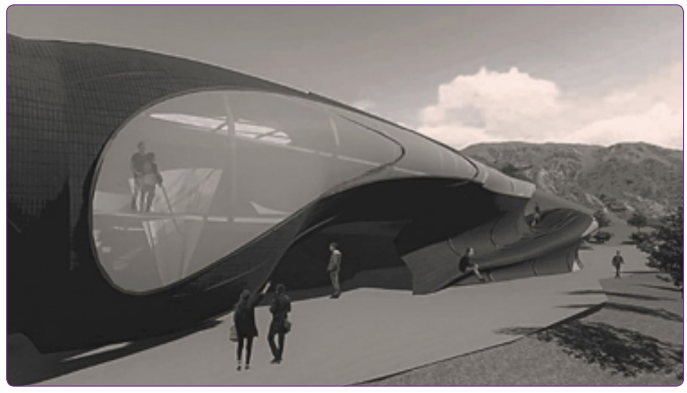

Figure 2. Digital Model of Medi(s)tation on Topography (2017). Source. Designer/Student Hasret Gül Atmaca.

to a tangent or copy of reality.[20] Essentially, diagrams are experimental constructs of reality (Figs. 1, 3, 5).

Phase 3. Mapping the Diagrams

"What is a map" and "what does mapping mean" are simultaneously questions about the world we live in and the maps we make of it.[21] The questions posed by a map are a dialectical tool and a scenario that helps to establish relationships between layers of diagrams. Mapping is a topology that produces sensitivity and atmosphere and a new whole whose space is engaged with this atmosphere. Each student in the group is expected to record on paper which layer they want to examine as an exercise. These papers are then distributed to other students in a roundtable. This is repeated five times, after which students are expected to question the relation between the second and third layers. Finally, students are asked to suggest a new layer that can be connected to these existing relationships and produce a name for the structure/scenario. This exercise helps students to understand the effect of increasing numbers of layer on the possibility of relative dialectical relationships.

In this kind of process, the designer identifies relationships and controls and directs the emerging representation depending on the particular situation as she/

[17] Tschumi, 1994, 23. [18] Lynn, 1999, p. 30. [19] Akın, Arıdağ, 2014, p. 78.

[20] Cimşit, Koş, Arıdağ, 2017, p. 130. [21] Pickles, 2004, p. 4.

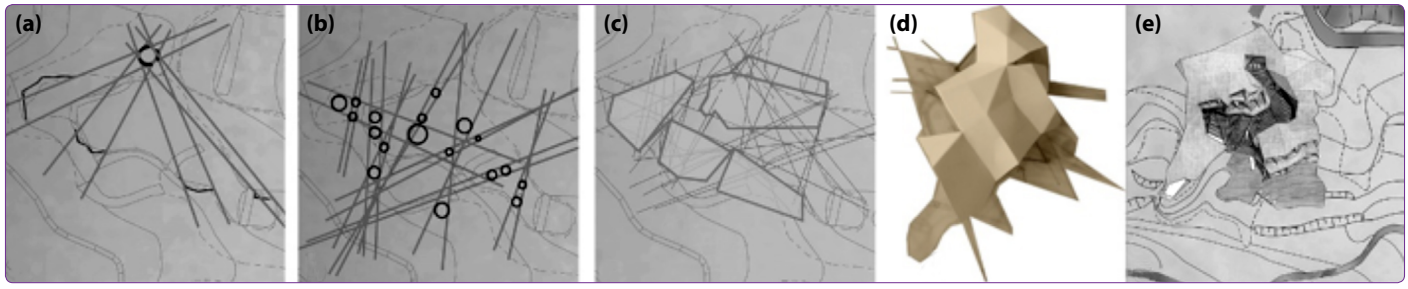

Figure 3. (a) Topography with Rocks and a Chimney. **(b)** Topography with Tree. **(c)** Mapping. **(d)** Modelling the diagrams **(e)** Site Plan Source. Designer/Student Merve Çakır.

Figure 4. Digital Model of Garden-Transitive with Topography Source. Designer/Student Merve Çakır.

he perceives, understands, and experiences it. This causes the representation to organize itself, giving a topological continuity to the relevant situation of knowledge. During the design process, diagrams contribute to the emerging representation as computational tools, increasing the possibilities of mapping and enabling the potential versions of the representation to exist simultaneously thanks to their transformative character (Fig. 3). The selected projects of the design process reveal three essential kinds of relationship with topography that include different topologies. Therefore, three student projects have been chosen to explain these relationships:

- Medi(s)tation: on the topography (Fig. 1, 2)
- Garden-transitive: with the topography (Fig. 3, 4)
- Cave-between: under/with the topography (Fig. 5, 6)

Medi(s)tation

In this project, analyses are conducted to explain the ratio of slope and solid-void present in a valley in the Ortahisar region of Cappadocia. Contour lines are used to identify the highest and lowest layers of the rocks rising on both sides of the valley, which are then connected by the shortest lines between them. Thus, the shortest path from the surrounding heights to the valley floor becomes predictable as the path that water would follow down the slope (Fig. 1).

The geometry of cavities and outcroppings in the valley is studied by plans and cross-sections, as this might give clues in terms of circulation and potential for spatialization. A pattern is formed based on the radii of the cavities, and springs drawn follow each other. While the areas within the drawn lines show the potential of spatialization and the possible landscape, those outside give information about circulation (Fig. 1b, 1c).

"As you follow the road through the Castle of İshak, the valley appears as it moves in a magical moment. These magnificent rocks, which have gained a soft appearance by water abrasion, turned into the hollows that can be sheltered in hidden spaces in a hidden valley by people's hands." 6.10.2017

"After a long time, the uniqueness of the road through the Castle of İshak is accompanying. When the road begins to curl, the tents appear on the plain under the shadow of the trees. A little later, there are the fruits under the shadow of the Castle. The breeze through the valley starts

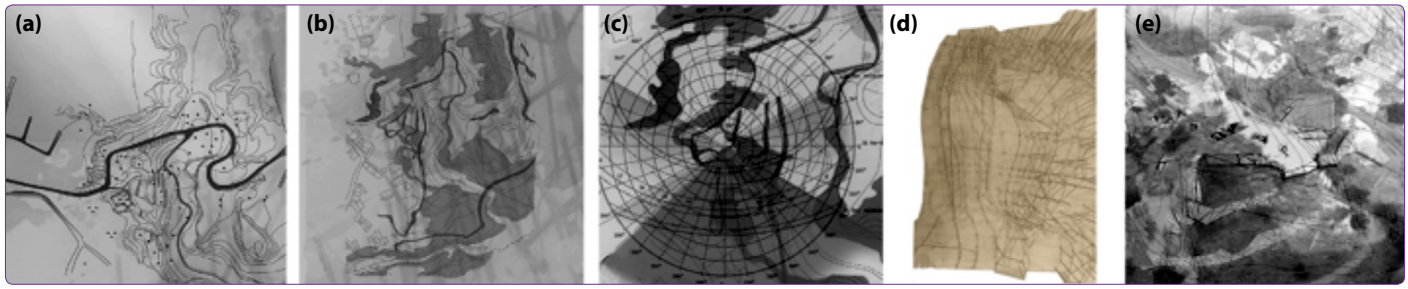

Figure 5. (a) Paths on Topography. **(b)** Paths inside Topography. **(c)** Sun with Topography. **(d)** Modelling the diagrams **(e)** Site Plan Source. Designer/Student Yağmur Karatepe.

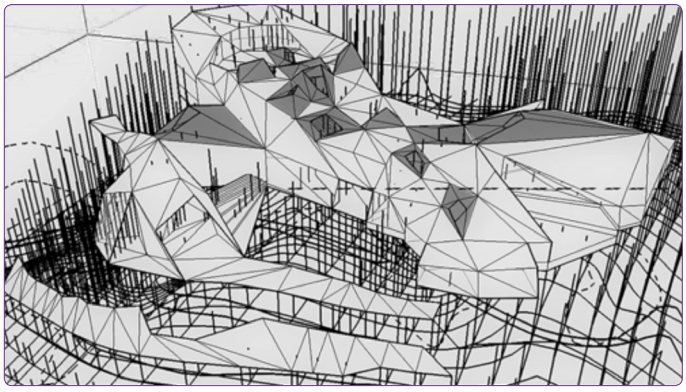

Figure 6. Digital Model of Cave-Between under/with Topography Source. Designer/Student Yağmur Karatepe.

and there are the children sit inside the shadow of carved rocks. A violin sounded with the wind." 06.10.2027 / Scenario by the Designer/Student Hasret Gül Atmaca

Garden-Transitive

In this project, relationships between openings and cavities are established depending on wind and sun in the context of topographical analysis. Accordingly, the route that a body can follow is determined. This route provides semi-open or closed space distributions, along with interior circulation. The idea of constructing a gardening atelier arises from an awareness of how fruit trees balance in the wind under natural ventilation (Fig. 3b). In addition, an atelier for local foods and seed propagation were considered. It was thought that the products made in the atelier, such as grape molasses, could be used to produce special dishes and that people interested in local food could interact locally. Also, such ateliers often have a restaurant nearby.

The locations of cavities at the site are considered to be important references for the formation of the space (Fig. 3a). The cavity's location is used as the stage for a conference hall, with seating areas around it. An atelier for stone carving is designed and exhibited where other cavities are located (Fig. 3c). The knowledge gained from the overlapping analysis of trees and cavities gains importance in the formation of shells and the design of spaces. Openings are designed to provide natural ventilation through the shell in the context of wind analysis. The relationship established with the view becomes important for locating accommodation, whose individual units extend toward that view. Thus, an atmosphere is created to watch the scenery of the sunrise. / Scenario by the Designer/Student Merve Çakır

Cave-Between

In this project, the collapses in the valley and surrounding areas and their impacts on rock formations over time are considered as an important reference point. Through these collapses, slopes have been formed allowing the settlement of people. These slopes are merged from their lower to their upper boundaries, creating new paths by extension in the rocks (Fig. 5a, 5b). With the help of these roads, the collapses in the area are connected, and the paths in and around the rocks define space by expanding it some points. The new space thus defined allows for the formation of specialized spaces.

The effect of the sun's path in the sky on topography is remarkable. It causes permanent dark areas to form in the cavities. Following this path over a full year allows this effect to be analysed and overlapped on the topographic map (Fig. 5c). At first, it is combined with the extensions of the rock slopes and then arranged using the geometry of the areas it touches as if the vertical angle of incidence was horizontal. A mysterious effect is created inside using light paths in the volumetric dimension. Ateliers may be designed for the observation of different effects both in earth and sky and on topography. Agricultural activities around the valley continue. There is a gathering area near the fairy chimney between the two roads, a lone chimney that becomes visible thanks to the light paths on the surface.

"Windows are open, the sun would rise. A few children suddenly rush out, they were busy with eating the apples they find in the garden. They run away and discover a cavity. A little later, they climb up to the stone next to the tree and decided to watch the sunrise from there. I heard that the sun will rise next to the castle." / Scenario by the Designer/Student Yağmur Karatepe

Conclusion

Cappadocia GEOFOLD

The design studio process of Cappadocia GEOFOLD is about achieving discipline. Eisenman[22] emphasized the relation between discipline and skill: "The difference between individual expression and critical thinking is related to the idea of discipline versus skill. Skills are the tools and techniques necessary to make architecture or painting. The discipline is concerned with the thinking that creates the discourse. Without skill, one cannot express himself/herself in painting or architecture. Without discipline, one can never be critical. Adaptive architecture requires skill. However, as skill increases, it becomes difficult to have discipline. Without the discipline, it is impossible to build an architecture that transcends borders. Skills provide the ability to make what people aware; discipline provides what is possible." Cappadocia GEOFOLD improves the quality of experience and allows information to be

[22] Eisenman, 1998, p. 140.

recoded during the design studio process. In this recoding and during the whole process, observation is an important tool for diagramming and mapping. Diagrams are created to engage with place and program as well as facilitate the augmentation of experience. This augmentation permits the emergence of scenario and phenomenona. Thus, marks start to appear on the map, and a multilayered structure is constructed by way of these phenomenologies. These geometric structures are then interconnected to create a topology, in other words, a spatial organization created by inclined planes.

Observation allows for the emergence of experience and practice. The two components of experience are Erfahrung and Erlebnis in German.[23] Erfahrung describes exploration and practice, while Erlebnis is concerned with perception and the inner life. The designer should be honored to perform his or her job well as a craftsman, an honor made possible by maps derived from phenomenologies dependent on awareness gained during the design process. Maps make the design process open and debatable while also recording knowledge. This allows the designer to remain at a critical distance in understanding what he or she is doing and to engage in design without making its cyclic and ever-changing direction static. A proactive process thus begins not only with the designer but also the space itself as the design object.

The program itself is not as decisive as in the classical architectural education process. It is essential to base a new rationality on a dialogue with the environment outside the program. Essentially, the dialogue between theory and practice gives more reference to the eco-technology that emerges from ecology. The technology here is information in a dialogue established with topography, information that reflects topography and is diagramed by making visible a knowledge of nature beyond physical topography alone. Diagrams constitute the sub-structure of topological formations, which are connected to topographic understanding by making information visible. The complexity (chaos) and stability (order) created by additional diagrams can conflict with each other. Students learn methods, however, to deal with this complexity. If the process results in a closed system and if a static relationship between the tools and the objective arises, this points to the incorrect use of the method. The Cartesian grid cannot transform. Thus, the opening of capacity (development) in the design process relies on increased intuition. This situation is most evident when intuitive powers are brought to bear on diagrams of places (dialectics), protecting unspoken knowledge and resulting in a topology. This allows two layers of experience

[23] Sennet, 2008, p. 376.

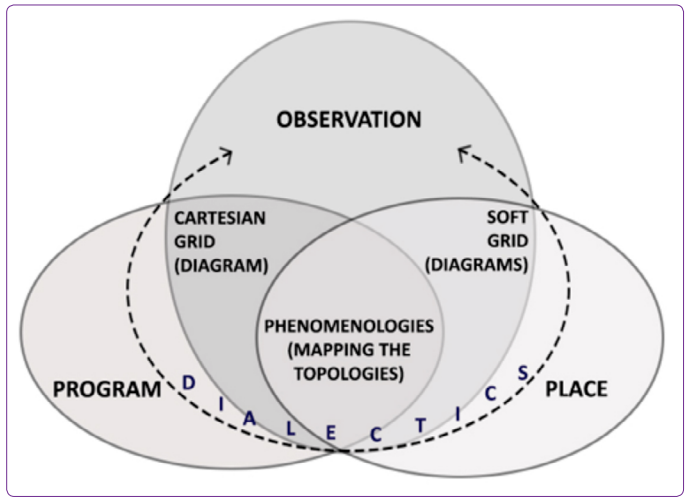

Figure 7. Diagram of the Design Process Cappadocia GEOFOLD Source. Authors.

Figure 8. Architectural Design Studio 6: A Transfer Station in the City Source. Designer/Student Okan Aktaş.

(Erlebnis-Erfahrung) to combine relationally and allows phenomenologies to become visible (Fig. 7). Cappadocia GEOFOLD offers a new approach to architectural design strategy. Computer logic is used as a strategy in the studio. It proposes a network of relationships strong enough to have a logical flow and differences depending on vectors, incorporating variation without distorting internal consistency. Transitive boundaries, responsive internal relations, multiple paths, and hierarchies of flow are characteristic of this kind of system. Cappadocia GEOFOLD reveals the potential of the whole as a temporary configuration open to time. Parts of the system consisting of crowds and collectives are either missing pieces of a lost order or parts of a whole that never happens. Collectivism requires a topological relationship. Architectural design methods should learn to manage this complexity.

Cappadocia GEOFOLD proposes an experimental and transitory approach. What is needed for this strategy is a parametrization of the reusable, irreducible, and insoluble entities. Cappadocia GEOFOLD is a phenomenon from parts to a whole, defined as intricate links/relations, not overlapping geometric forms. The form is important only in terms of relations between things. These relational forms are defined either as connections and configurations of points with each other or as sequences and distributions

of events. Cappadocia GEOFOLD is not a discursive practice but a material condition. It allows an architecture to be imagined that can respond to differences in a fluid and precise manner by recognizing the detailed conditions that determine the connections between parts and understands architectural design as a sequence of events. Thus, the design process has a multilayered character. For this reason, a design process formed through a dynamic model opens the way to creating, thinking, and transforming unexpected thoughts. The process reveals what is possible by theorizing. It therefore becomes possible to apply this method to other design studios in urban life (Fig. 8) since there are different kinds of atmosphere in the city that can be revealed by the production of different kinds of knowledge through diagram and mapping.

Notes

1: It is possible to think phenomenology as a practice that increases the potential of meaning and thus the knowledge in meaning, as Norwood (2018:22) stated "Architecture doesn't need a phenomenology; it needs phenomenologies."

3: The unfold is not as the contrary to the fold but as the continuation of this act (Vyzoviti, 2003: 132).

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