

The chronotopological emergence from the spatial narrative to performance

Zeynep ÖZTÜRK¹, Levent ARIDAĞ²

¹ zozturk2018@gtu.edu.tr • Department of Architecture, Institute of Natural and Applied Sciences, Gebze Technical University, Kocaeli, Turkey

² leventaridag@gtu.edu.tr • Department of Architecture, Faculty of Architecture, Gebze Technical University, Kocaeli, Turkey

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Abstract

The discipline of architecture often benefited from literary narratives while developing new designing and representation methods. The richness of the descriptions in literary narratives triggers the different strata of our perception and may enrich our space production strategies. In line with this opinion, Umberto Eco's novel *The Name of the Rose* was examined architecturally and the transition process from literary narrative to spatial narrative was investigated in the present study. The concepts representation, narrative, sign, time, and space constitute the conceptual framework of the research. The aim is to examine the relationship dynamics behind the signs regarding time-space based on Bakhtin's concept of chronotope, to enrich the parameters used in the design environment, and to develop a more responsive possibility of architecture. *The Name of the Rose* was chosen due to the historical references it comprises, the abundance of its potentials in the fields of intertextuality and semiotics, and the fact that the literary text was also adapted to a motion picture. A new architectural design strategy was developed by bringing out the relationship between the chronotope layers being the signs of time-space phenomena. In conclusion, it was understood that the literary narrative does not only include descriptions regarding space but also knowledge regarding time and the knowledge of fictional text was evolved into a new method of production by the transformation of this knowledge into parameter used in spatial design. The study aimed to transform the textual performance of the novel "*The Name of the Rose*" into a spatial performance.

Keywords

Architectural design, Design strategies, Chronotope, Space-time, Umberto Eco.

1. Introduction

The architectural design discipline has focused on process-oriented studies instead of outcomes lately. One of the reasons for this approach is that the place undergoes a constant transformation based on internal and external dynamics and information flows in the formation period. In this regard, the fact that the form has a steady and idealized finale image is questioned. Obtaining information, processing information, establishing, and managing relationships between phenomenon, questioning the interdisciplinary interactions, controlling, and directing information flows during the design process make the process important. Featuring the process enables us to put back representation and representation styles and focus on the phenomenon beyond representation and generate an opinion approach based on understanding the relations between phenomena. It requires focusing on indicators expressed by different representation styles in understanding and evaluating the complex relationship between construction-environment-human and phenomenon referred by the indicators. Phenomenology aims to understand the core of humans, place, and life. It provides usual results about the general by examining the descriptions about humans, place, and life. Time information that is immanent to place is one of these phenomena. This study was conducted to question how time information exists in architectural design and examine a discovery process on knowledge representation and relational patterns related to architectural design.

The process of discovery is intended to contribute to the education of architectural design by providing a novel methodology for the process of revealing the knowledge behind the representation, diagrammatic reasoning, and knowledge encoding.

With Roland Barthes's essay, "The Death of the Author", first published in 1968 in France, and Michel Foucault's 1969 analysis, "What is an Author?", the author was no longer an authority holding a central and holistic consciousness with dominance on the text

(Demirtaş, 2016). In the reader-oriented approach, the text becomes independent of its author once it is formed and recreated with the interpretation of the reader. Eco adopts a reader and interpretation-oriented postmodern approach and regards the novel as an interpreting machine. The postmodern theory focuses on knowledge organization. Knowledge must be functional and practical. The signifier only exists in postmodern theory, there is no continuous and consistent reality, thus there is no static signified to which the signifier refers (Erkman-Akerson, 2019). The literary text of a novel forms a knowledge cluster and this knowledge is functionalized and refers to the signifier, while the emerging spatial formation refers to any signified among infinite interpretation probabilities. The Name of the Rose, the 1980 novel by Eco was selected as the subject of study due to its historical references, intertextuality, good examples of semiotics, and adaptation into a screenplay.

For the theoretical background of the research, architects, especially theoretician architects who are the reflection of the postmodern theory in architecture were chosen. In the present study, it was attempted to bring a postmodern interpretation to the novel through creating a spatial narrative from the literary narrative in the context of the concept of representation and space, narrative and space, and time and space. In this context, Bakhtin's concept of the literary chronotope which addresses the indivisible integrity of time-space constitutes the main structure of the conceptual framework.

According to the literary theory of Bakhtin, it is aimed to determine the chronotopes in literary narratives based on the concept of chronotopes, and to reach the conceptual representations by considering chronotopes as an indicator. It is aimed to produce a new system by coding the information immanent to each concept of chronotope in the transformation of chronotopes in the novel into a topology, discover the possibilities of this system, and turn into a performance at the architectural level by studying the information behind the information given in the literary fiction in the context of literature-architec-

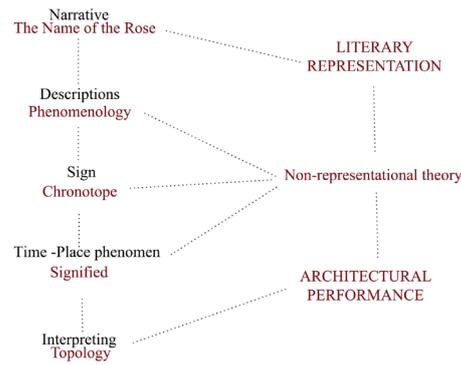


Figure 1. Study flow chart.

ture-philosophy disciplines. The literary representation product was examined with a phenomenological qualitative approach in the management of the study and the following steps were followed.

- Forming the conceptual framework of the study in the context of representation and place, narrative, sign and place, time, and place.
- Detecting the chronotopes in “The Name of the Rose”, which was the field of study.
- Interpreting the time phenomenon in the chronotope descriptions.
- Considering time-spatial meaning referred by chronotope as a sign and its architectural equivalents.
- Associating the chronotopological formation of the narrative with geometry.

The steps to obtain an architectural performance from a literary representation via relationships non-representation developed within the framework of the relationship in Figure 1. The time-spatial meaning referred to by the chronotopes in the narrative is used in forming the stages of a new spatial strategy.

2. Theories of representation-narrative-time and place

2.1. Representation and place

The architectural practice expresses its ideational fiction and existence style with representations. The place is considered a concept that can easily be degraded to representations, but the meaning of representation has started to be discussed in the 20th century and various breakdowns have occurred in architectural representation with digitalization and technological development. As criticism of easy degradation of place to representation

and representation policies, non-representation theories have been discussed with the studies by Nigel Thrift. The non-representation theory refers to various studies published in the middle of the 1990s in England as an alternative approach to understanding, practice, and production of geographical information. Non-representation theory firstly proposed by Thrift aims to go beyond the duality of cartesian mentality that emerged by negating geographical analyses to representations, a type of representation, and the identities in the world (Simpson, 2016). Non-representation, theories aim to develop the methods of interaction of human and non-human bodies, and the ways of these interactions to produce and transform places and social life. Performance theory turns into a methodological tool in the non-representation theory. The reason for this is that it removes the reference points about the observer and observation. The study process is a performance as a whole and the researcher becomes a part of the performance. According to Dirksmeier, “performance” does not create “representations”, but it creates practices in reality. Based on the methodological foundation of non-representation theory, performance turns itself into a qualitative method suitable for the complexity of social life in modernity (Dirksmeier & Helbrecht, 2008). The non-representation theory sees the place as liveliness in the constant formation of the total of performative moments instead of a vacancy. It is the focus on the process of forming the representation rather than the outcome of events and direct degradation to a representation.

2.2. Time and place

The relationship of space-time, a phenomenology of time and place, discussions in fields like philosophy, physics, mathematics, psychology, and sociology are the fields of study where various relationships are established with different disciplines today. This study focuses on how time is addressed in the architectural discipline. The answers to the following questions were sought: “Can temporal information be coded?”, “How can time be used as a

strategical tool in architectural design?”, “If temporal and place are significant with a dependent relationship, does the temporal model describing the experience provide the model of the place?”, etc. The opinion on what time is shattered with Einstein’s theory of relativity. Einstein opposed the idea that time is absolute and explained this with the theory of relativity in 1905. Einstein asserts that time changes based on place and observer. He proposes that space and time perception changes from different reference points based on the observer (Einstein, 2016). We can conclude that time is a concept working differently for everyone based on this determination. Einstein states that we should perceive time as a coordinate in space rather than distinguishing it as three-dimensional space and linear time. In this regard, time is the coordinate system enabling us to perceive our experiences in space in a consecutive sequence.

Einstein displays a post-structural attitude in the point extending from absolute truth to relativity. No phenomenon is absolute now. At this point, the concept of *Différance*¹ by Derrida steps in. The meaning is not absolute, and it reproduces within the framework of the observer’s movement, experience, and perception. The meaning is always deferred due to the abundance of meaning revealed, the deferred meaning is re-interpreted, becomes different, and enables infinite meaning production. According to the post-structural idea asserting that the meaning of the text is determined by the reader, the possibility of interpretation appears when the reader assumes. Therefore, the text has many readers and many meanings.

Pallasmaa states that architecture is a visual and material form of art understood as a spatial framework of human existence and activities, but we live within time as much as in place and architecture provides a human measurement to our relationship with this mysterious dimension and mediates our relationship with time and place. According to Pallasmaa, architecture expresses our spatial experiences as well as temporal experiences even though we are not aware. There could be slow as well as very impatient spaces. The grand build-

ings of the past are the museum of time that were not affected by the tension of the modern world. It can be determined that time has gradually accelerated in modern architecture and that it has gotten more rapid in today’s deconstructed and conspicuous buildings. This architectural rush is expressed in two opponents: On one hand, there are so many motifs, materials, and details, on the other hand, the forced simplicity of buildings that aim to impress us through a single simultaneous image exists (Pallasmaa, 2016). If time can be coded with a parametric understanding exceeding beyond the metric system and the pattern between information flows can be established naturally, the need to deconstruct a reductive architecture may disappear. Henri Bergson defines the time in two categories as a measurable time of mathematics and physics, and the inner time of our consciousness. Time emphasized by Bergson is associated with the concept of duration felt by the person in his soul, sensed via feelings, that cannot be measured and change from person to person. According to him, time is duration, and the duration is the state of formation shaped with the person’s mind and recreated at that moment. Chronological objective time is perceived in place and makes events meaningful in that place (Bergson, 1986). People have a heterogeneous understanding of time including objective time perception as well as biological and psychological time perception. Thus, humans have a relational and flowing understanding of time in addition to the understanding of time determined by the mind during the design process. This relationality and dynamism of time show that representation might have limitless forms that are different from one another (Akin & Arıdag, 2014).

Deleuze defines the split of time as an actual and virtual split. According to Deleuze, time is the one splitting now in two directions as past and future indefinitely instead of devouring past and future slowly. The one defining the actual split is bygone now. The virtual split is the place where the past is preserved. Hakan Yuçer mentions in the “Introduction to Bergsonism” section of Deleuze that Bergson uses the virtual² in the same sense as power and possi-

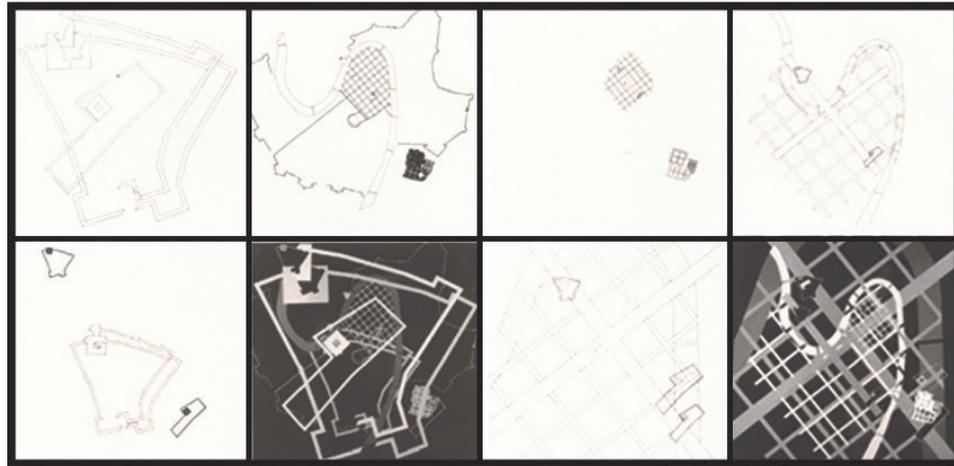


Figure 2. Romeo And Juliet superposition.

bility, but that Deleuze sees the virtual as a power that is not predetermined, but what happens when action is taken. The unwritten symphony in the mind of a compose is virtual. It is the one that cannot be known as a possibility beforehand. However, Bergson's virtual contains the possibility to blossom a plant that has yet to bloom. Both plants have the same knowledge but it is a matter of time for the transition from one to another (Deleuze, 1990). Virtual becomes important in the context of an unprecedented possibility in a Deleuzian meaning. According to Deleuze, the field of possibilities brings along multidimensional temporariness and these possibilities reveal a non-chronological reality deeper than chronology. The synthesis of these multidirectional heterogeneous time layers forms a time crystal. This synthesis is the crystallization of the actualization of now experienced and the virtual layers in memory within a constant motion and exchange (Deleuze, 2016). The novel contains virtual possibilities that we perceive through chronotopes and time starts the place of exchange between the virtual and actual by creating an actualization. The fact that time and motion have become observable through a digital medium may enable materializing and experiencing time and generate new narratives.

2.3. Narrative and place

Literature is one of the rich resources that architecture has fed from with its narratives. We can consider narrative as the representation styles of our experiences in different environments. An incarnation of our experiences

in different mediums with narratives enables us to produce new approaches in social and philosophical studies. Johnstone states that narrative has become interdisciplinary as scientists have dealt with a narrative more and explained the importance of narrative in terms of study methods as follows: We consider narrative as a way to build "events" and give them a meaning because we like the parts of experience flow and we put limit and importance on them by labeling them (Johnstone, 2001). In this regard, literary narratives are tools that need to be used to increase experience parameters and possibilities while forming the narrative of the place. The architecture discipline was nourished from literature while developing new design methods, especially in the 20th century.

Studies on narrative and the language system are referred to have become the subjects of studies in semiotics. Romeo and Juliet project of Eisenman who studies the intersection of text and architecture by establishing an analogy with lingual concepts is the first project to use a literary or scientific text apart from mathematical figures. Eisenman evaluated different versions of his Romeo and Juliet narrative at various scales in a diagram and created a novel narrative by overlapping these versions and finally a project for the Venice Biennale in 1986. He has three different versions of the Romeo and Juliet narrative and in each narrative the story is different. Each version of the narrative was formed at different scales in a diagram and placed in different locations on a

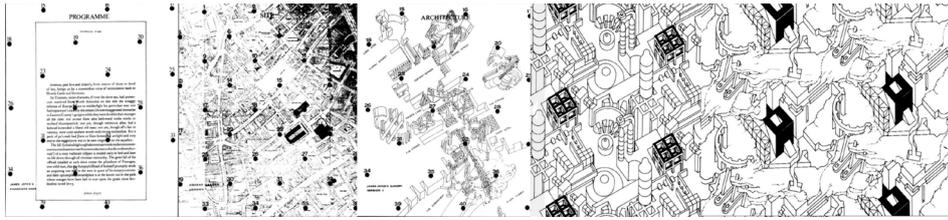


Figure 3. Joyce's Garden .

map of Verona (Figure 2). A superposed status resulting from an overlapping of the diagrams creates new narratives (Eisenman, 1999).

Studying the narrative, detailing our understanding of the structure and function of the narrative, and asking new questions are one of the tools to be used in spatial design. Tschumi suggests that the dialectic established between abstraction and narrative, verbal and visual will create new discoveries and asks, "If authors are able to manipulate the structure of stories, vocabularies, and grammars, are architects able to do the same? In other words, couldn't they objectively or creatively arrange a program in eight similar ways?" (Jamieson & Roberts-Hughes, 2015). Tschumi suggests creating parallels between narrative sequences and spatial sequences by examining "The Masque of the Red Death", a short story by Edgar Allan Poe. He believes that a tangled relationship between language and architect gives a framework to be used in the analysis of the connections between facts and spaces beyond functionalist concepts (Tschumi, 1996). Examining *Finnegans Wake*, an experimental novel by James Joyce, he finds out such tools as the use of dot grid, text overlay in addition to the use of opposite and mostly conflicting logic of different systems (Figure 3).

A Swiss linguist, Saussure stated that language consists of indicators and these indicators could be gathered within the framework of certain structures and that the indicators and the conditions to gather them form the language system. Words are the indicators of the language system. The tangible pronunciation of a word has also an intangible conceptualization taking place in our minds. Eco states that an indicator's reference to a signified in a given cultural context implies that this indicator is sufficient to be interpreted as an indicator. Pierce says that an indicator must be subject to interpretation to analyze the relation so

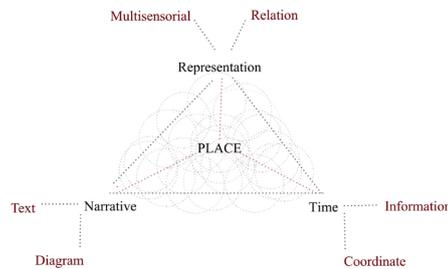


Figure 4. The relationship between narrative, time, and representation in place formation.

that the indicator can represent a concept or tangible asset (Eco, 1989). The interpretation of the indicator allows establishing relationships with other indicators constantly and producing a chain of indefinite meaning and limitless interpretation. The meaning of literary indicators is not static. There are various perceptions and interpretations of the same narrative in the literature. Several interpretations and perceptions equivalent to the number of readers are produced. The freedom of interpretation in literary pieces and the richness of descriptions trigger different layers of our perception and may enrich our spatial production tactics. The space is mainly produced and transformed by the interaction of various phenomena (Figure 4). Architecture has a time experience as well as a space experience. In the depiction of this experience, the narrative reveals the relationship between verbal and visual through means of representation, such as diagrams and maps. The interactions of the relationships that make up the narrative and the processes of producing and transforming different relationships of these interactions are the field non-representation of theory.

The architectural representation can produce an indefinite number of styles today. The important thing is to try to understand the relational patterns beyond representations without any deg-

radation because meaning is now the one that changes based on the observer. Lexical abundance and the relationship between these abundances reveal the performance of indefinite interpretation. Literary works are open to different interpretation relations as they are interpreted differently by each reader. According to Eco, art pieces produce different interpretations and performances with each perception as they get a new perspective with each understanding (Eco, 2019). Each reader in literary text and each user in architecture allow producing a different meaning. In this regard, this study aimed to transform the textual performance of the novel into a spatial performance. The performance will be addressed within the framework of the time and space³ relationship in this study. To understand this framework better, it is expected that the concept of time, extension, and their coexistence will be examined in detail. The knowledge of the fictional text is expected to evolve into a new production method after the transformation of the relationship between the text and the designer into a unique mapping-interpretation.

The concept of chronotope was first derived by Russian physiologist Alexei Ukhtomsky in a class where Mihail Bakhtin attended in 1925. Bakhtin brought the theory of carnival and the term chronotope into literature. We can define chronotope developed by Bakhtin based on Einstein's theory of relativity as time-extension clots (Erkman-Akerson, 2019). These time-extension patterns organize the main narrative of the novel and incident nodes connect to these chronotopes, untwine, and become visible. The word chronotope is the combination of Greek words "Chronos" (time) and "topos" (place).

According to Bakhtin, chronotope with the function of "materializing the time in extension" is not only the coexistence of time and place but also the emotional value they have. Considering time and place together, the fact that these two concepts have a common emotion concertizes the definition of chronotope (Bakhtin, 2010). The beyond representation theory attaches importance to "emotion and affection" (Thrift, 2007). In studies on body and emotion, the body is considered a transcendent entity where emotion forms while the individual and environment are considered as phenomena producing one another in studies on material elements and emotion. The non-representation theory sees the place as liveliness in the constant formation of the total of performative moments instead of a vacancy. These performative experience moments are shaped by components such as the individual's daily routine, cognitive background, mood, practical skills, and impulses (Prince, 2018). Chronotopes can be used as nonrepresentation tools forming new reference frameworks for practices that cannot be explained with conventional representation methods.

Bakhtin emphasizes chronotope's function of representation. Virtual time-extensions of the real-world form the source of representation. The representations of time and extension, which are the reflection of the fictionalized world, arise with the chronotopes. There is a borderline between the virtual world, which is the source of representation, and the world represented in fiction but this borderline is a relationship creating constant interaction such as living organisms and the environment around them (Bakhtin, 2010). This relationship between the piece and



Figure 5. Chronotope scenes in "The name of the rose" film.

life is a specific creative time extension. Chronotopes materialize events, make them visible and turn them into conveyable information by representing them. It is one of the representations of chronotopes in the scenes in the movie (Figure 5). Certain chronotopes in the novel "The Name of the Rose" examined are road-welcoming, labyrinth, threshold, courtyard, monastery, church, and door (Eco, 2004). There are times and places in the number of descriptions. Chronotopes are limitless and each narrative has different chronotopes.

It was concluded that time and place coexist and they can be read with various conceptualizations in the background after the reading on the intersection of literature and architecture (Figure 6). When chronotopes think of as an architectural representation, notions that are referred to are searched.

"While we toiled up the steep path that wound around the mountain, I saw the abbey" (Eco, 2004, 23)

The chronotope of the path contains performative motion; thus, time and path flow together. The path is equivalent to circulation, promenade, axis, route, direction, reaching- arriving, welcoming, possibility, multifunctionality, connection, etc. The path may enable the formation of the place by getting layered within itself. Since the chronotope of the road is understood with progress based on motion, it is associated with the concept of promenade architecture.

"Let us think about this," William said. "Five quadrangular or vaguely trapezoidal rooms, each with one window, arranged around a windowless heptagonal room to which the stairway leads. It seems elementary to me. We are in the east tower. From the outside each tower shows five windows and five sides. It works out. The empty room is the one facing east, the same direction as the choir of the church; the dawn sun illuminates the altar, which I find right and pious. The only clever idea, it seems to me, is the use of alabaster slabs. In the daytime they admit a fine light, and at night not even the moon's rays can penetrate. Now let's see where the other two doors of the heptagonal room lead." My master was mistaken,

and the builders of the library had been shrewder than we thought. I cannot explain clearly what happened, but as we left the tower room, the order of the rooms became more confused " (Eco, 2004, 182)

The chronotope of a labyrinth is associated with the path and the disappearance of the path causes a performative loss as well as a deterioration in the perception of time as it contains indirect means. Labyrinth evokes concepts like chaos, mystery, possibility, transformation, unfamiliarity, and familiarity with a place. The furcation of the roads and the state of encountering recurrent similar roads enable increasing the number of experience possibilities. Forked and proliferating paths evoke a labyrinth

"I remained, on the threshold between refectory and kitchen, and so did a vague something near the oven. " (Eco, 2004, 259)

The chronotope of threshold provides continuity between places and refers to emotional and temporal meanings. Thresholds are the points for the transition between places. Time wavers momentarily based on the events experienced in the threshold and when it goes out of the normal progress of biographic time, it creates crises and milestones. Thresholds are blurry places enabling interaction between time and place, and where relations affect and transform one another.

"I shall have occasion to discuss the layout of the abbey more than once, and in greater detail. After the gate (which was the only opening in the outer walls) a tree-lined avenue led to the abbatial church. To the left of the avenue there stretched a vast area of vegetable gardens and, as I later learned, the botanical garden, around the two buildings of the balneary and the infirmary and herbarium, following the curve of the walls. Behind, to the left of the church, rose the Aedificium, separated from the church by a yard scattered with graves. The north door of the church faced the south tower of the Aedificium, which offered, frontally, its west tower to the arriving visitor's eyes; then, to the left, the building joined the walls and seemed to plunge, from its towers, toward the abyss, over which the north tower, seen obliquely, projected. To

the right of the church there were some buildings, sheltering in its lee, and others around the cloister: the dormitory, no doubt, the abbot's house, and the pilgrims' hospice, where we were heading.” (Eco, 2004, 28)

The chronotope of the monastery contains daily life elements and the time cycle reflects cyclical time after being defined based on natural events. The monastery is a microcosmos as it contains all the places in the narrative and has a time cycle about itself. The fact that it contains all the places in the novel evokes topography and boundary concepts as an architectural indicator.

“We walked along the left side of the church, passed the great door, and crossed the cloister to reach the pilgrims' hospice.” (Eco, 2004, 190)

The chronotope of the courtyard is providing temporal and spatial continuity. It provides the possibility of building a limitless and continuous place by separating the parts of the place with a function and meaning. The courtyard evokes the concept of a surrounded vacancy, transition, and continuity.

“Assuming this is the only way into the Aedificium. In centuries past this was a fortress, and it must have more

secret entrances than we know of.” (Eco, 2004, 173)

The chronotope of the door is the control spot in time and place. A controlled entrance to a place causes a continuity or disruption in time. The door is a controlled and artificial border. The door is defined as a vertical gap, control entrance, obstacle, and opening. The church is a place where spiritual feelings are felt, and people gather. The chronotope of the church represents the soul of time and its architectural style gives information about the construction technology of the era. We see marks of time on the building.

3. The emergence of chronotopological space

The knowledge that time is inherent to space reveals the common dynamics of literature and architecture and allows the two disciplines to be fed from one another within the framework of time and space. Noting that time plays a certain role in transformative morphogenetic processes and that we need to establish time-sensitive equations to manage to change flows of information, Kwinter sets the example of ice cube and snow crystal to understand the mechanics of time-sensitive form creation. If we evaluate the formation of the ice cube, we can see that the ice is formed by pouring water into the ice bars and by putting it in a freezing place. In the formation of such a form, the boundaries are fixed geometrically by using molds. All the ice cubes are formed in the same ice bar. They are similar to each other and no flow is allowed in the system. So there is no real-time to be found in this system. In a strictly controlled grid, everything is locked into a static spatial system that reproduces a pre-given form. Formation of the snow crystal is a dynamic process that occurs with the conjunction of three different flows. Mineral particles, moisture saturated environment, thermal heat exchange create flows. The space and time of the formation of the crystal are determined spontaneously as a result of flows. Its form changes according to factors such as wind, pressure, and humidity environmentally. The snow crystal constantly carries the

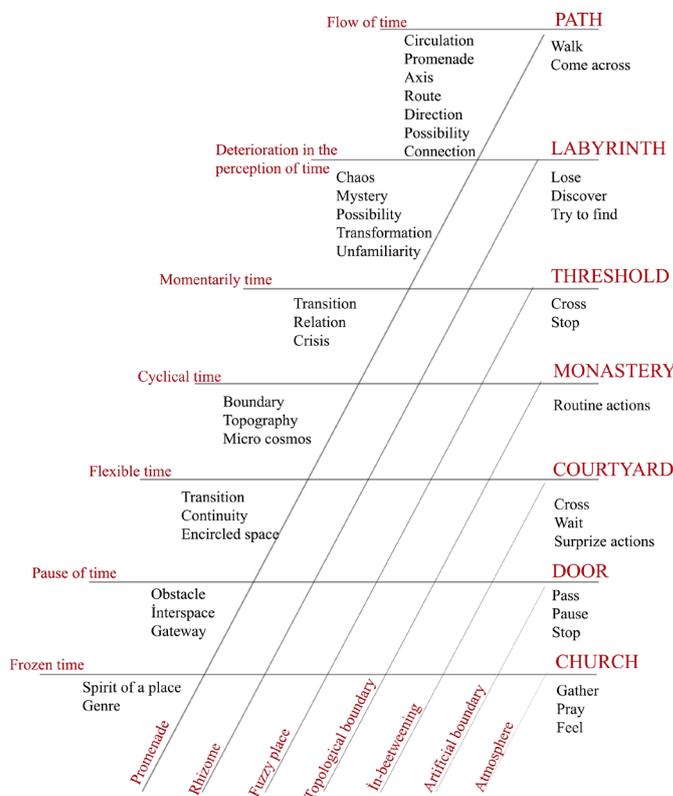


Figure 6. Conceptual diagram of the chronotope relationship.

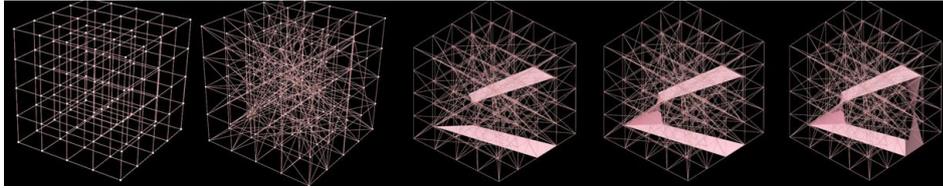


Figure 7. Formation of chronotopes in the grid system.

molecular structure information of the combination of hydrogen and oxygen elements in its system and it crystallizes in a hexagonal shape according to this information. Despite this fixed information matrix, the result is never the same. Inhomogeneities occur due to the movement of the particle over time and flow processes. Because the crystal preserves its sensitivity to both time and environmental flows (Kwinter, 2002). Snowflake interacts with all other processes throughout space-time and belongs to a dynamic and fluid world. It produces itself by managing all the living and non-living complex processes in the flow.

A grid system was formed in the fictionalized experiment. The grid used at the beginning of the system is a tool that facilitates the understanding of the system in infinite space-time. As Tschumi stated, the grid is only an indicator that has no origin anymore, as it is widely used in history. Thanks to its ordinate and recurring signs, the grid defines a space consisting of singular points with infinite potential, and it is an incomplete infinite spread that is not central and does not include a hierarchy (Tschumi, 1996). In this study, the grid system was determined as a 10m x 10m x 10m cubic volume defining a specific coordinate system that facilitates our coding of time-spatial information. The chronotope system, which takes reference from the grid system, establishes an open-ended system due to its complex, blurry and interpretable structure. This system was produced via the Rhino program. The surfaces formed with the grid system point and line commands were formed with the surface from points command. Each space was produced on a different layer and the topology was made visible by overlapping it. By using the mutual coordinates of the 10m x 10m x 10m grid system that refers to the possible chronotope system, the relationship between the coordinates was randomly

selected with slash lines. This random selection process was continued until it became complicated for the knowledge accumulation of the labyrinth chronotope. Visuals expressing the emergence of the chaotic relationship between time-spatial coordinates in the process contain both information about the path chronotope and the entangled vectors that cannot be resolved at first glance, as well as information about the labyrinth chronotope. This complicated system contains a multitude of possible spatial combinations. Vectors going in certain directions in the grid system represent information inherent in the relationship between time segments. This information may be inherent in cycles (cyclic time) in nature, or it may correspond to various phenomena of time (such as daily time, loss of time, loss of perception of time, freezing of time, suspension, pause a moment, flow of time, timelessness, expansion of the moment, etc.) Time is an effective creative principle in this integrated system, and it is the power dynamic that transforms the grid. The grid can provide the information without simplifying it, by digitizing it and using it in the complex network of relationships in which it is in motion.

With the knowledge of the labyrinth chronotope, the space becomes chaotic with the interaction of certain time-spatial coordinates, and it becomes fluid in space. Fractions of time fold over one another and define both a process and a superficial formation, which is the "path". The path provides a planar connection between different levels and does not allow for a break between coordinates by connecting with thresholds and transforming into a promenade. Path fractions contain the possibility that they may extend infinitely in planar directions. Threshold fractions, on the other hand, transform the path into a promenade by connecting different path spaces, providing a time-spatial continuity. Space, any place, which is

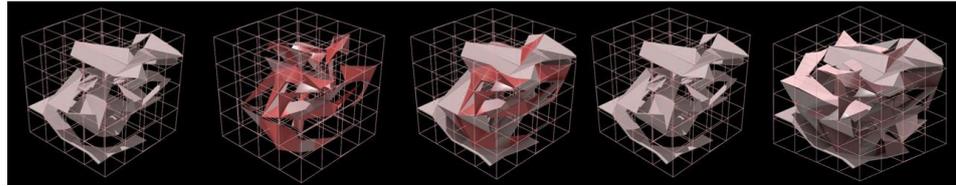


Figure 8. Formation of topology in the grid system.

revealed by the progress in the promenade, describes a fluid space that differs in time. This fluid space is in a para-metric state with the multiplicity of information layers in interaction with environmental dynamics. As the layers increase, the sensitivity of the system increases and transforms the environment with its being.

Continuity between coordinates was expressed in the perspective and side view of the promenade. This continuum refers to the time-spatial flow. While the defined path continues the state of flow and occurrence, it reveals new temporalities in the intersections and joints of the grid in certain regions. Where actions are transformed, time also transforms, ceases, or establishes a continuum. The threshold chronotope is the space that provides the connection between these points.

Continuity with thresholds is established between road spaces, and while time continues to flow, road progress and folding, new spatialities begin to be established in between, courtyards and spaces are formed as a result of the relations and flows of the two spaces. The courtyard space includes the definitions of the intermediate state, intermediate space, third event, temporal interval within the formed structure. Path fractions that come together with thresholds form a courtyard by connecting with different threshold spaces. The courtyard chronotope contains a definition of space surrounded by thresholds and paths, and as the lower chronotope of the threshold, it contains continuity and inter-time between time and space.

Individual fractions create a system that reproduces in different coordinates by being pieced together. The connection of time-spatial points allows for blurring and intermediate state formation. The space transformed into the promenade as a singularity, consisting of multiple path spaces, is pieced to another promenade through thresholds

expressed with red surfaces and transforms into a new state of being.

A new space begins to grow as a result of the folding and accumulation of the path, threshold, and courtyard systems. In the first stage, the selection of a coordinate in space, the proliferation of coordinates, their interaction, the formation of a surface road segment from interaction, the formation of courtyard and threshold spaces with the differentiation of the road is an evolutionary space formation. This space also resembles an organism, with its internal dynamics evolving from stillness to life. Like an organism, it can rearrange the space it has settled in with its activities, and it can form a structure with its existence and space itself. Organisms need to moderate the variability they encounter throughout their lives under time-spatially changing conditions and determine which elements of the external world will be brought together to form their space and what kind of relationships between elements will relate to themselves (Lewontin, 2001). In this context, the topology formed as a result of the experiment creates an organism “microcosmos” that can interact with its internal dynamics and environment. The microcosmos that is formed metaphorically carry the knowledge of their cyclical temporalities and the monastic chronotope.

Once a system is understood to have evolved what matters is the transformations it undergoes, and all transformations in a system are the result of energy or information passing through. These energy flows provide the flow of information in many temporal scales, creating self-generating dynamic, and complex systems. Yildirim states that an experimental study aims to stabilize complex systems at the end of the interaction process. In this process, when the equilibrium situation is reached, various possibilities may arise. Moreover, the architect can create new possibilities by disrupting this balance

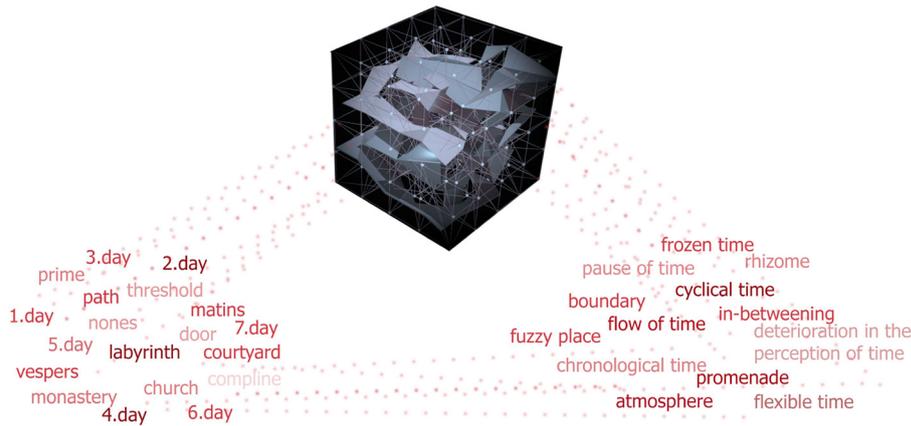


Figure 9. Chronotope concepts and topology relationship.

(Yıldırım, 2015). In this experiment, the process produced itself, the information that constitutes the starting point multiplied in the process and revealed different forms by transforming itself. Time is a parameter in design. Time as a parameter is the knowledge that changes itself continuously and constitutes the starting point.

When Saussure defines the sign, he says “it evokes that thing even though it is not that thing”. The topology formed in this context is an indicator of time. A flexible perspective and open systems can refer to what is shown differently depending on the varying situations in which it will be found. Thus, the meaning of the experience is not reduced to a single “moment”, it leaks into other time-spaces, the meaning of the experience becomes ambiguous, and the field of experience expands. The temporality of the experience increases. In this study, the chronotopes in the novel “The name of the rose”, the conceptual equivalents of the chronotopes were demonstrated, and the resulting topology was the indicator of time. An indication of time not referring to a particular signification stands against a reductive context. The designated ambiguous factor is in motion towards an interpretative infinity, in change.

The product of architectural representation, without being subjected to any reduction in the dynamic process, is open to flexible meanings, with its infinite interpretation potential, as it appears far from being a single signified and demonstrative, all this pro-



Figure 10. Propagation of the time crystal over time-space layers as a topology.

cess and formation strategy can be displaced by questioning. With such a dissociation, the topology distributes the internal and environmental information to bring them together over different time-spatial layers. This dispersion is also the diffusion of the crystalline image. According to Tschumi, adopting a posthumanist architecture will bring the subject closer to a decentralized understanding of architecture that dissipates the subject, far from formalism and separates from functionalist rigidity (Tschumi, 1996). Such an erotesis allows us to consider the many parameters and limits imposed on architectural design. Perceiving the phenomena embedded in the reductions can enable us to discover how space transforms into space by recognizing the patterns

created by relations in time-space and how it contains multiplicities beyond the apparent singularity.

While the emergence of space in the exchange from the actual to the virtual, from the virtual to the actual within the scope of the experiment exists with the virtuality of a text belonging to the past, space itself is within the actuality of the present. The ongoing experience in space is a state of exchange that includes the multiplicity of unpredictable routes. Such space forms a time crystal in which past, present, and future are intertwined and bifurcated. Deleuze's time crystal⁴ is considered as both a metaphor and a crystal structure, a topology that provides the formation of space and contains the plurality of time layers.

4. Conclusion

Today, the effective use of technology causes great changes in the architectural discipline. In particular, the fact that the computer plays a role in the design allows the architect to control, manage and edit all the data obtained. The active presence of digital in the process transforms architectural representation methods and representation spaces into an interpretable and more dynamic platform. The design process is now an interactive process with the ability to encode a lot of information, manage the process, and reconstruct the process with feedback. With the architect's ability to control and manipulate information, perceiving the design process numerically and phenomenologically provides a more holistic perspective and a more sensitive approach. The digital control of information processing activates interdisciplinary studies and facilitates the involvement of other disciplines in the architectural design process. While literature and philosophy develop these sensitivities, architects frequently resort to disciplines. While the literary structure includes descriptions in their narratives, architects need experience and the description of the moment of experience to understand the phenomena behind the apparent relationships. This partnership brings the two disciplines closer to one another. Philosophy, on the other hand,

makes it possible to interpret these relationships with different concepts and to produce new concepts. Melting the architect, analytical thought, and philosophical thought in the same pot, the object of architectural production becomes both an experimental and an intellectual product.

Time and space are inseparable integrity. Bakhtin addresses such integrity in conjunction with the concept of the chronotope in his novel. Every attempt at the definition of space is an effort to understand time. Time can be defined in many categories by various classifications. Today, with the advances in science and technology and the increase of the universal consciousness, our perception and understanding of time are changing. It is difficult to make a specific definition of time. Despite all developments, time is still a phenomenon that we cannot fully define, but we can simultaneously perceive our past, present, and future experiences in space by using the power of time information in cooperation with technology. The experience of space is also the experience of time. The place is established with time and exists in time.

In this study, answers were sought regarding the questions like "How can space be coded without ignoring time?", "How the understanding of architecture that reveals time is can be possible?" "What are the occurrences of the chronotopes in Eco's novel regarding time and space?" by trying to include time information in the process and the knowledge of the time-space tangles that make up our experience were tried to be solved. Time is "the ground of experience," says Daniel Boorstin (Gleick, 2016). Our experiences include action and emotion, our actions need a time-spatial space to take place, separating this space and rethinking it starts a new formation process. When our vital patterns are approached with a phenomenological intuition, the answer can be given that codes such as action, movement, the moment felt, knowledge of time, emotion value can turn into a spatial occurrence by transforming them into design parameters. The space turned into an architectural-geometrical representation from a literary representation as a result of such an ex-

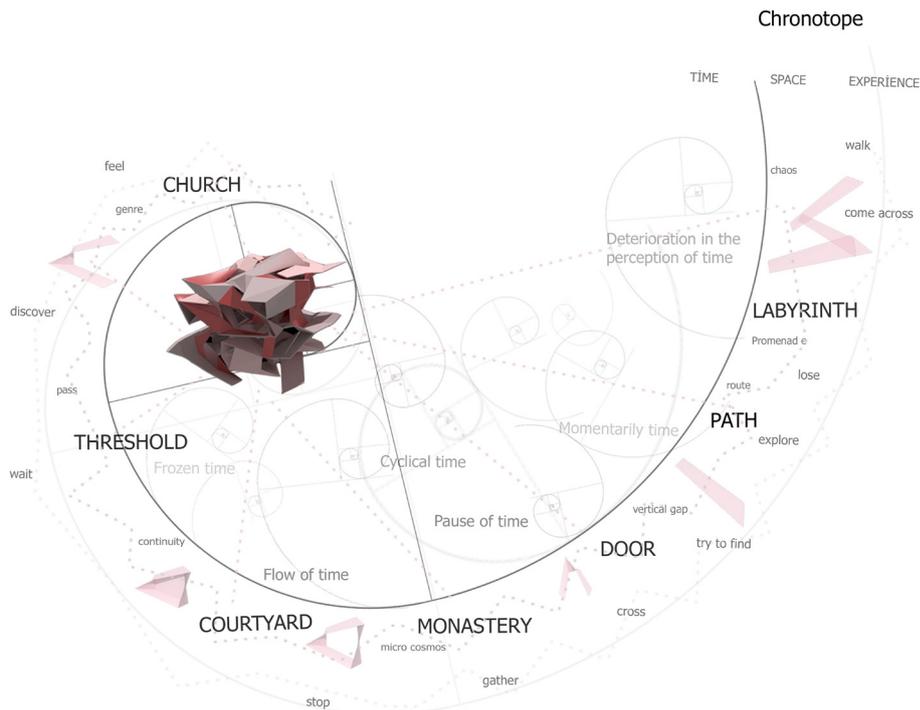


Figure 11. The process of creating time-space-experience layers into space.

perimental practice is one of the interpretations of Eco's novel.

Relationships between information regarding space-time may enable the production of different models with technological tools. The space formed in this process is the narrative of the geometry between the information dynamics. When the formal production is left to the computer, it is thought that new geometric systems can be produced by converting chronotopes into software with the ability of computers to produce. This geometry is a sensitive formation with its space and internal dynamics by acting like an organism that reproduces itself after its initial knowledge. In Seamon's terms, this formation exists through 'synergistic' relationships. Each chronotope is united to one another and to the whole itself. The whole creates a productive space that is sustained and sustained by dense composite parts (Seamon, 2018). It is an important step to try to understand the integrity and the synergetic relationships it contains with a phenomenological approach, to create an organic world, to get to know our world better, to shape and protect it. This approach can also extend to the ethical arena. If more efficient and

sensitive forms can be found from a structural point of view, then less material will be used. If a system that will work more efficiently in terms of energy consumption can be invented, it will help to save the world's resources. Thus, this design strategy can be considered as an ethical argument about the environment.

The space created by the strategy in the work produces virtuality that challenges the function, meaning, and representation that cannot be represented by classical constraints. Virtual reality is a potential that offers the possibility of movement without physicality. Reality is the temporal formation of one of the many potential manifestations of virtuality (Eisenman & Rucker, 1997). In architecture, virtuality provides an experience that allows for unpredictable connections, against reductionist attempts. Our lives are rapidly becoming virtual with digitalization accelerating with the Covid-19 pandemic process. The term phygital, which includes physical and digital experience together, is about to enter our lives. The word phygital is a combination of the words 'physical' and 'digital'. It defines the common life of physical space and virtual space.

The physical experience layer that exists in the exchange of virtuality and actuality is surrounded by virtuality, and the state of experience of operant and virtual possibilities constitutes the phytological experience. Phygital experience is the synchronous experience of physical and digital components in the same place (Ballina et al., 2019). Virtual possibilities in the system include the unpredictable beyond the limits of representation. Architects can encode a person's experience of the built environment in real-time through technology and use this knowledge to create new physical and digital experience environments. The digital experience always contains uncertain possibilities, unforeseen potentials, and this brings us closer to a multi-time, figuratively "timeless" design concept.

Endnotes

¹ Derrida created the word of "Différance" with the derivation of the word "differe" in Latin including temporariness with the meaning of "delay" and "adjourning" and the word of "differer" used in Western languages meaning "not being identical", "being distinctive", and "different"[Can, 2016].

² Hakan Yuçer states that the virtual contains potential (the power of a thing to change and become something that it has never been) but does not meet it fully. He defines virtual as the reality of a power that is not a dream and has not been understood completely[Yüçer, 2009].

³ According to the Oxford Dictionary;

Space : the area outside the earth's atmosphere where all the other planets and stars are, an amount of an area or of a place that is empty or that is available for use,

Place : a particular position, point or area, a particular city, town, building, etc.

⁴ The time crystal, according to Deleuze, constitutes the realm of virtual multidimensional possibilities. The actuality of the experienced present and the synthesis of virtual heterogeneous layers in memory in continuous motion and exchange is equal to the crystallization of time.

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