

Research Article

New Trend Spaces in Contemporary Architecture

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Abstract

This article focuses on the production methods of contemporary style spaces, which are fundamentally different from traditional spaces, especially by exhibiting; flexibility, dynamism, and diversity themes in the formation of contemporary spatial relations as a conceptual tool. Space is naturally a unit with defined boundaries and we stand in the middle of this unit, thus, spaces have more or less boundaries, and when these boundaries become more transparent, permeable, and dynamic instead of rigid and fixed the spatial values of spaces increase and turn into flexible spaces. In this framework, spatial design is an organization that is; flexible and dynamic with various scenarios and necessities, it's the art of space-making with both 2-d (two-dimensional) and 3-d (three-dimensional) tools and methods. Spatial design is creative and innovative, hence contemporary. By adapting spatial design; instead of traditional fixed walls, it is possible to obtain scenario-based, flexible, multi-functional spaces within an artistic value like stage-designs. In the article, first of all, the concept of spatial design has been introduced, based on a number of basic topics; the first is, the new space relations used in today's interiors instead of the traditional corridor and cell space relation with 'depth/density/integration' space relations. Secondly, contemporary style new space identifiers have been introduced, instead of traditional reinforced concrete walls. Contemporary style new spatial identifiers that are presented in the paper are; I/L/U type vertical panels, point-like dividers, level differences, furniture and convexity, material & texture difference (all 3 faces walls/floors/ceilings), color change, 3d space modules (spatial furniture), and finally ceilings & lighting.

By this study, it's mainly aimed to put forth the changing design principles of contemporary interiors that have developed recent years differently from the past. At this point, study brings out the research question -1 : What are the changing design parameters of today's interiors? In addition, research question-2: What are new space definers instead of walls? As indicated by the hypothesis of the study, it is aimed to make a comparative analysis of interiors between periods, to reveal the differences and explain new methods for contemporary interiors. To demonstrate the changing design principles of interiors' today; spatial design will be introduced with, new spatial relations, new space types, new space identifiers that creates today's; dynamic, flexible and multifunctional interiors. At this point, research question-3 appears as; 'What is 'expandability-flexibility- convexity' and how each used with spatial design? Third question is very clearly shed a light to the hypothesis of the study and defines new spatial relations as; depth, density and

integration. By using spatial tools, enclosed spaces that are syntax via corridor system leaves it's place to spatial design, which creates sub-spaces with in a one big space without existing walls. At spatial design, there is no existing 4 walls, instead, sub-spaces are formed very quickly to the changing scenarios and necessary modifications easily so it's flexible. On the other hand, spatial design, can adapt to time, with 7/24 logic, thus, some spaces can expand, get bigger time to time in order to react changing functions than shrink to it's normal sizes after the activity. Thus, expandability tool supports flexibility by the way space adaptation. Lastly, integration tool, can be used to create modular spaces, through necessities, 1 module , 2 modules or 3 modules..etc. spaces can integrate easily by the help of light dividers and integrated spaces and activities can take place.

As indicated above, hypothesis of the study is based on spatial design and it has 3 main research questions to define/answer the main problem. In the study, it's aimed to demonstrate solutions for these 3 problems; 1)What are the changing design parameters of today's interiors?, 2) What are new space definers?, 3) 'what are 'expandability-flexibility- convexity' tools ?

The methodology consists of two main parts, the first of which includes a comprehensive literature review on; space, spatiality, spatial relations and contemporary space identifiers and the definitions of; expandability, flexibility, convexity. Secondly, area analyzes have been made on the contemporary interior designs, that are determined as the hypothesis of the study. Analyzes and findings are presented within the framework of 'contemporary period spatiality' versus 'traditional spatial organization' as a comparative design investigation. As a result, the aim of this study is; the introduction and presentation of spatial design as a method of contemporary space production techniques.

Keywords: Space Production, Spatial Design, Contemporary Interior Design, Spatial Identifiers, Flexibility

1. Space As A Contemporary Style Product: Spatiality

At contemporary space construction, walls are replaced by space boundaries, which are open to creativity. By eliminating walls from interiors, spaces gain diverse design features. However, at traditional spaces, the construction type of a wall takes attention such as; concrete/steel, at contemporary construction, space border method is the main concern such as; colors, textures, planes, level changes or furniture, etc.. as 2d or 3 dimensional elements. Thus, this big difference between traditional and contemporary construction methods reveal the changing interior design themes today; instead of cell-2-cell rooms, flexible & transformable & open spaces comes forward. Meiss, defines space by Aristotle's words such as; space as a container of things; 'we would thus be occupying a succession of all-embracing envelopes ranging rather like Russian dolls from those that are 'within the limits of the sky' to the very smallest' [7] and adds that; 'Hence, space is necessarily a hollow limited externally and filled internally. There is no empty space; everything has it's position & location, it's place' [7]. On the other hand, architecture is an art through the discourse of Bruno Taut (1977) and the difference that distinguishes architecture from all other arts, come from the elements of architecture which are three basically; technical-constructional-functional, dimensions of architecture.

These three dimensions basically separates architecture from all other arts. Thus, we can say that architecture is an art but also a technical, constructional and functional production.

In addition, todays interior designs have more close relations with art. Today the meaning and scope of interior desing covers diverse applications differently from traditional enclosed 4 walls cell type spaces. Today an interior design more or less include a relationship with design philosophies of art, which is more real style maker to response diverse lifestyles and scenarios. However, a good interior design is based on a concept generally and this concept creates the spatial organization of an interior. Thus, spatiality is different from space by the way it reflects the concept in 3d, volumetric approach.

As indicated by also Higgins (2015), modernism has quite big effect in interior design by the way it introduced free plan/open plan concept. By modernism, there are no existing walls in an one big spac any more, just structure and facade elements which means that an interior can be designed separately form the architectural structure. [6]

At this point, it is necessary to mention Le Corbusier's Domino house design, which is an icon for architecture through history by the way it's discovery of free plan and elimination of heavy walls from interiors. Le Corbusier's Domino house was not only an architectural exploration but also was a device for artistic, one-off and unique interiors. Domino house design creates a new space architecture by eliminating structure from interior walls as it was at masonry buildings, thus structure become free from interior and envelope, which created unfinished interiors and light facade design.

Thus, Le Corbusier created an architectural model of flexibility in the history of architecture. At Domino-house flexible architecture and dynamic design modul was formed very clearly with the open plan concept, that is adaptable, transformable, and unique to its end user. Domino house or flexible architecture in other words, was the concept of modernism that was formed by only tectonic instruments of architecture such as; structural elements, coloumns, beams, stairs and shafts, thus it was the separation architectural tectonics from architectural space or interior design.(Figure 1)

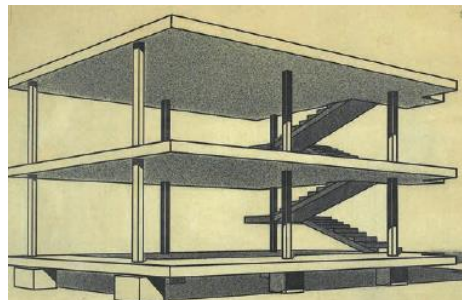


Figure 1. Le Corbusier's Maison Dom-Ino (1914) [6]

Thus, it can be clearly emphasized that Le Corbusier's Domino house and its skeleton structure was the main concept of modernism that created 'Free Plan'. At modern period, this device spreaded rapidly all over Europe, in addition with the effect of industrial revolution. Modernism was also named as industrial era, which traditional methods were left over and all architectural instruments were realized as mass productions at fabricas and they were just installed at site, thus, after war for homeless people, mass housing buildings were produced quickly by the help of industrial era. And by the help of industrial revolution, the forerunner architects of modernism; Le Corbusier and Mies van der Rohe, could be able to design and construct high density mass-housing projects with free plan/open plan concept.

Modernism, maybe the most breaking point of architectural history, freed interiors from heavy walls and create economical, shrunken houses for working class, named as 'houses for proletarian lifestyle'. Thus, however today the same concept exist its totally different from modernist approach. Le Corbusier also designed the interiors of these proletarian lifestyle houses, that are 50 m² with open plan concept, loss of heavy bearing walls, designed with flexible instruments, accommodate 1-2 to 5 people by the help of multi-functional space design. In addition, with the Domino-house concept, kitchens and bathrooms were installed directly as an industrial production, they were designed as spatial furniture and after produced in factories, they were just installed at site, so the constructions were very quick and flexible at modernist period. Ofcourse, the power of industrial revolution for to create Frankfurt kitchens like cabinets, can be appreciated.

Through all these factors, Le Corbusier created a model which has an idea based on 'unfinished interiors' concept, that allows flexibility with unclear borders of spaces, that can easily change through the needs of its' users. Thus, by creating unfinished interiors, and eliminating spaces from rigid walls, users gain opportunity to arrange their spaces.

[6]

On the other hand, however modernism and open-plan concept was a breaking point through the history of architecture, it was failed after a while, in terms of loss of personalization and romanticism, standardization and its 'machine for living' concept. People found these houses too standart, dull and spritless after a while, and they don't like so much standardization. Thus, post-modernizm was a result of this failure, and people began to reflect their roots, lifestyles, originality by eliminating standardization and mechanization.

Today's interior design is more close to 3-dimensional concept creation, scenario-base organization, or an installation project to emphasize the concept in a better way. Thus, spatial design of contemporary period is different from space organization of modern period by some sort of headings as indicated above;

1. *Spatial design of contemporary period has different design parameters when compared with space organization of modernism such as; temporariness, transformable, being able to disappear, multifunctional, borderness.*
2. *Spatial design is human-based thus it includes; scenario, concept, and installations, and it is more like to live a 3d literature.*
3. *Spatial design does not include standard space definitions like modernism. There aren't any heavy existing walls to define spaces, its more like the installations that define spaces.*
4. *Spatial design is an innovator, thus, by a good-design, one can feel her/his-self at somewhere out, thus, it has atmospheric qualities.*

As indicated above, spatial design as contemporary style of space production has quite effective new ways of space creation that make different from all other periods. For example, figure 2 shows an interior design of a cafe that is totally different from classical tables, kitchen and circulation organization. This space is totally an art installation to create the cafe space and a restaurant in Bangkok, that serves Asian street food. Design has been build on a street vendor's cart, a dining module that reflects the street spirit and interior design is the result of this installation. [6](Figure 2)



Figure 2. The concept of restaurant and its spatial picture. [6]

An other sample for spatial design is presented from a restaurant in a museum in Santiago de Compostela, Spain. At this installation, its aimed to emphasize open air festivals and communal gatherings of the city by placing two big table with an abstract tree structure (like sitting outside imagination) as a bar that is designed with temporality. [6] (Figure 3)



Figure 3. A the spatial picture of cafe [6]

2. Spatial Design Through Architectural History and Philosophies

2.1. Theo Van Doesburg and overlapping of vertical planes

An interior space organization can be realized by using some sort of different methods such as; linear, radial, clustered and grid strategies. For example, Dutch designer Theo Van Doesburg had an important role on the development of spatial organization by using space instrument, as a member of the De Stijl movement in the early 1920s. Figure 4-b presents the Maison Particuliere (Private House), that was a collaboration between Dutch artist Theo van Doesburg and architect Cornelis van Eesteren, which they created a pair of houses for an exhibition featuring De Stijl group in 1918.(Figure 4. a-b)

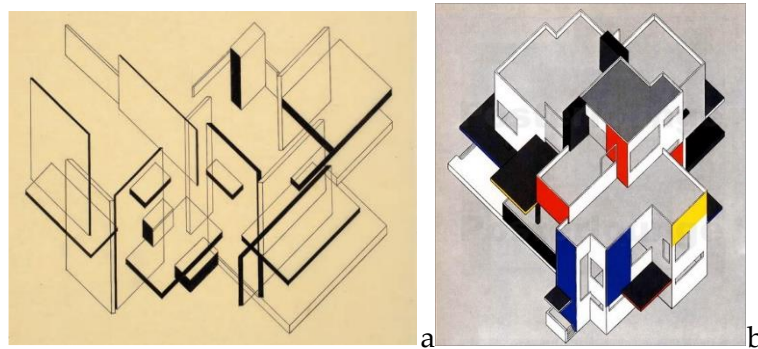


Figure 4. a. Doesburg's space idea (source: Higgins, 2015:27), b. Maison Particuliere (private house), [URL3].

The reflections of Doesburg's space idea (overlapping of vertical planes) has been recently seen at an exhibition stand designed by Stefan Zwicky for carpet manufacturer at the Heimtextil trade Show in Frankfurt (1993). The installation creates spatial design of stand and consists of overlapping vertical planes likely Van Doesburg idea. [6] (Figure5)

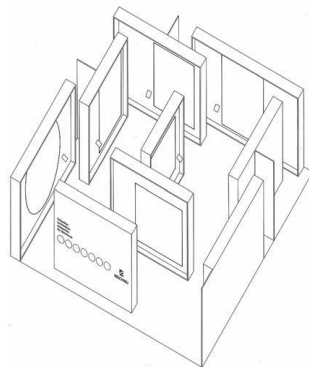


Figure 5. Zwicky's exhibition stand [6]

Another overlapping of planes that create space sample comes from Delft city in 2012 with design of social work place. This installation of vertical planes is also multifunctional and accommodates convexity by the way using vertical planes as space identifier and bookshelves. [6] (Figure 6)



Figure 6. A social work place in Delft [6]

2.2. Glass House and space within a space concept:

Philip Johnson's Glass House (1949) is an icon of the twentieth century with a free open plan installation and interior-exterior permeability. In the house the cylindrical space is the only space with enclosed walls and it looks like a furniture, an object in the space, placed in the open plan. (Figure 7)

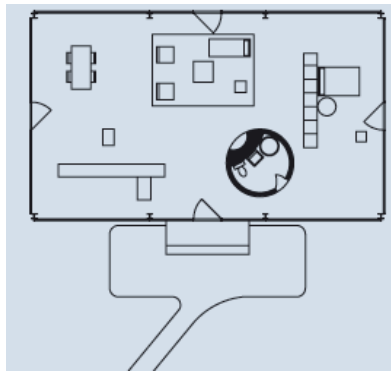


Figure 7. Philip Johnson's Glass House (1949) [6]

Contemporary and recent reflections of the 'glass house' concept can be found at today's contemporary style interiors as art installations. John Pawson's 'plain space' is one of that 'space within a space' concept which is designed as an exhibition room at Vicenza, Italy in 2012. Another 'glass house' concept reflection is from Tianjin China with an installation of curvilinear permeable ornate colored space identifier. The difference between two installations reveals by the material usage which first one is solid, and second one is a permeable material; textile. Thus, in addition to the form of the space,

texture also has an effective addition to the concept of contemporary style interiors. [6]
(Figure 8 a-b)



Figure 8. a) John Pawson's 'plain space', b) meeting room in Tianjin, China. [6]

The space idea of glass house, creates an iconic spatial issue, by classifying sub spaces into two; solid borders and transparent borders in one big space such as; the solid borders created by enclosed walls as solid brick cylinder within a glass transparent box. This 'space within a space' concept is a great idea of 'glass house' with organizing space with two volumes as located space and its surrounding. And the located object creates diverse compositions around in terms of form and material such as; a circular object or box creates different spatial effect around, in addition, glass or brick material has different spatial effects. [6]

3. Classification of Architectural Dimensions Between Traditional and Contemporary Styles

At this point, it is important to classify architectural dimensions through the styles such as; 'technical-constructional-functional', with a comparative approach between traditional and contemporary styles. Space, constitutes the basic difference between two significant periods. In the traditional period, spaces can be formed within three aspects, not only the functional aspects create the space but also technical and constructional equipments were necessary to create space; thus, generally 4 rigid walls were constructed to create a space. But at contemporary style, spaces can just deal with functional aspects and freed from other technical aspects, thus, at contemporary spaces the installation comes forward for the activity without walls. (Table 1)

Table 1. Comparison of dimensions of architecture between 'traditional & contemporary'

DIMENSIONS OF ARCH.	TRADITIONAL PERIOD	CONTEMPORARY PERIOD
TECHNICAL	integrated	separated
CONSTRUCTIONAL	integrated	separated
FUNCTIONAL	integrated	separated

4. Space Organization Versus Spatial Relations

At contemporary style spaces, these dimensions of architecture; 'technical-constructional-functional' begin to work separately with the device of 'open-plan' concept. Thus, technical and constructional aspects can come together, but the functional aspect of architecture declares its independence and 'Spatial design' begins to take place as 'Space Architecture'. (Table 2)

Table 2. Comparison of Space formations of two important styles: traditional & contemporary

	SPACE ORG.	SPATIAL ORG.
TRADITIONAL STYLE	SYNTAX OF CELL TYPE SPACES SIDE BY SIDE VIA CORRIDOR	
CONTEMPORARY STYLE		1)SPATIALDEPTH 2)SPATIAL INTEGRATION 3)SPATIAL DENSITY

These space relations exactly reveal the difference between traditional and contemporary space organizations. In the paper, to uncover this discrepancy between traditional and contemporary space organizations have been investigated.

4.1. Traditional Space Organization - Cell to Cell Syntax via Corridor System

In this part, Turkish house has been examined through its space organization as a traditional style, that rooms are arranged side by side syntax relation via the corridor system. This type can also be seen at early republic apartment plans. At traditional organizations, differently from contemporary, privacy concept is dominant, contrast to flexibility. Through this privacy and simplicity, all different functional activity areas are separated from each other with 4 walls very simply without aesthetic concerns. Thus, this simple construction brings high privacy but less flexibility and adaptability, thus it's unchangeable and rigid. (Figure 9)

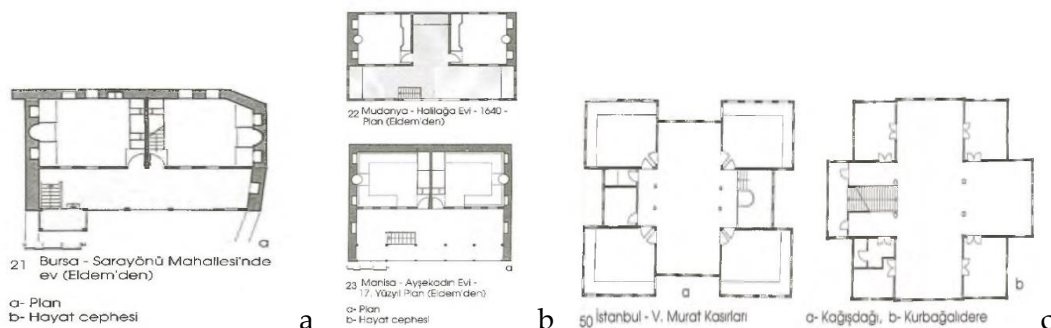


Figure 9. a-b) Turkish house at Bursa Sarayönü Mahallesi, Architect Seadat Hakkı Eldem (source: Kuban, 2005:53), c) Turkish Hayatlı House, İstanbul [10]

4.2. Contemporary Style of Space Organizations: New Spatial Relations; Depth & Integration & Density

'Spatial relations naturally reveal when two or more spaces come together to create a building interior. According to Higgins (2015); there are some sorts of ways to realize relations between spaces differently from traditional style such as; space within a space, overlapping spaces and adjacent spaces are some of them. In the study these relations are introduced as; depth-integration and density. On the hand, in this study as contemporary style of spatial production, new space relations have been presented to bring together two or more spaces in one big space. These new space, contemporary style space relations are introduced in the study as; depth, integration and density which all include the volumetric design principles. Depth space relation is the overlapping of spaces comes from Gestalt perception principle as the space front of other space can be seen as a whole, and the back space has still borders. Integration space relation is formed by integrity and harmony design principles, the last one density is the repetition and rhythmic syntax of spaces. [6]

4.2.1. Spatial Depth

At spatial depth, overlapping of spaces occur and different functional sub-spaces gather under one roof, however one space is defined by a free standing-wall, another space can be bordered by a ceiling over it and again another can be bordered by the floor material. By this way, different functional spaces come together under one roof, and the spatial organization of these spaces belongs to perception. Spatial depth, differently from integration and density, exhibits perception of space as overlapping of spaces which is clearly matched with the early paintings of Le Corbusier. Le Corbusier's paintings around 1920's; Still Life, is very open that every object in the painting contributes to the relative homogeneity of space. And their models placed in the center of the composition, an axonometric effect as a result of that composition with flatness of backgrounds and as result zones bordering the painting which remains equivocal. Indeed, when we analyze Le Corbusier's studio design which is a combination of his purist paintings with architectural equivalents; 'the house is also a swallow box containing various levels, volumes and simple geometrical elements within the frame of external walls boundary. (Figure 10)

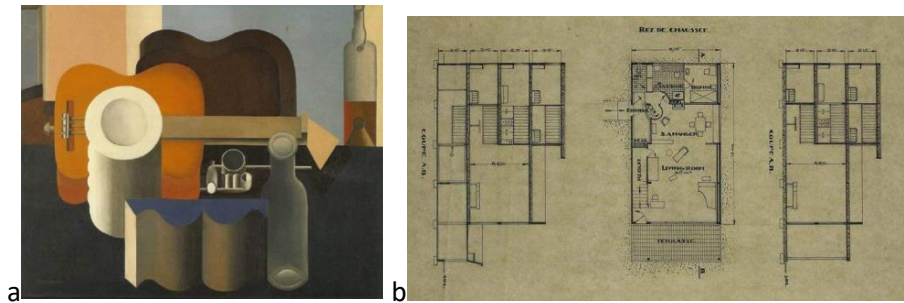


Figure 10. a) Charles Edouard Jeanneret, *Still Life*, 1920, (source: Morra, 2017:95), b) *Maison Citrohan*, 1922 [9]

In addition, in 1920's, Mies Van der Rohe achieved to create a spatial organization consists of flowing of spaces one into another, by using transparent and open space borders at the Tugendhat House in Brno, Czechoslovakia, in 1928-30. By using, chrome columns, circular and semi-wooden panel; Mies used to achieved a corridor in front of the glass facade and a semi-circular dining room. [14] (Figure.11a) At the Barcelona Pavillion (1929), Mies used a free-standing onyx wall, to create two different functional spaces separated from each other by a vertical plane such as; living room and piano room. (Figure.11b)



Figure 11. a-b) *Tugendhat House Living area, view from entrance door on the lower landing* [URL-1]

Space elements define different space organizations and the degree of weakness or strength between two or more spaces and create the link between spaces. There are two types of space relations, first one is traditional one, juxtaposition which spaces sentax side by side via corridor. The other one is integration as overlapping of spaces with a common link space. Integration can be created by weak spaces and weak structures between different functional spaces increase the integration between spaces and create serial vision. On the other hand, juxtaposition consists of well-defined closed space sequences such as room, bedroom, cell, hall and a corridor, which are all separated from other spaces with high level privacy. Spatial interpenetration creates continuity from one space to another which; wall, ceiling, floor - appears to belong to two or more spaces as a unity

principle. Thereby, integration creates a high level of integration between different functional spaces. [7] (Figure 12)

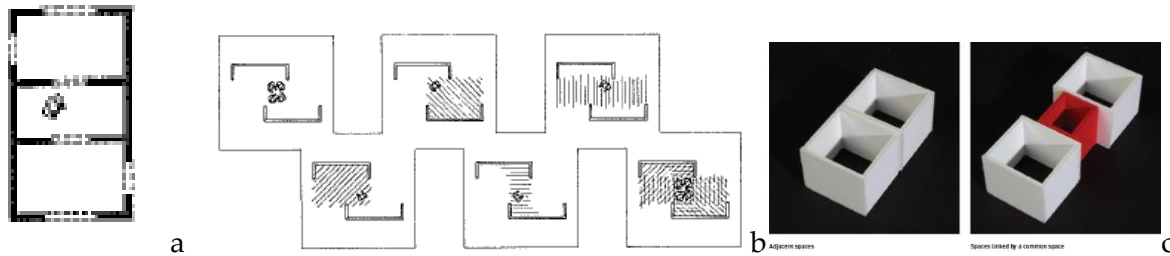


Figure 12. a) Spatial juxtaposition, b) Spatial interpenetration (Source: Meiss, 2013:139), c) Well-closed adjacent spaces as juxtaposition. [6]

4.2.3. Spatial Density

Spaces does not have only depth; it has also more or less dense. This is generally the case when we work with shallow space, but we can also create density in deep space; the 'Cordoba' Mosque with its 'forest' of columns is deep space of extraordinary density. [7] (Figure 13)



Figure 13. Dense space: interior of the Cordoba Mosque [7]

Density can be realized by creating sub-spaces in one big space by using different colors, patterns, decorative materials of floors and ceilings, as a unitary space defined in one big spaces. Density is the repetition of these unitary spaces with weak borders and strong decorative pattern and can be full or empty. [7] (Figure 14)

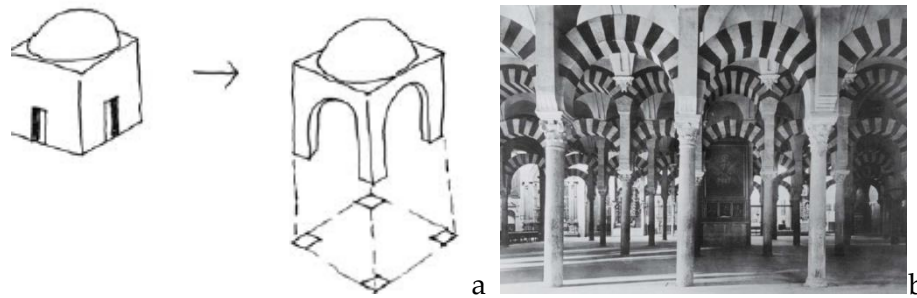


Figure 14. Unitary space; the degree of strongly close to weakly organized dense spatiality, the view of the large hall transverse to the severely resolved wall structure consisting of columns and arches, Great Mosque, Cordoba [4]

4.3. Architectural Samples for Traditional & Contemporary Space

Organizations

Through the years, architectural design of bureaus have changed via their space organizations and there are mainly 2 types which are totally different from each other such as (Table 3); 1. Cell-type Traditional Bureau (traditional), 2. Open plan type Bureau (contemporary)

	TRADITIONAL STYLE	CONTEMPORARY STYLE
CELL TYPE	+	
OPEN PLAN TYPE		+

Table 3. Space Organizations of Traditional and Contemporary Style Bureaus

4.3.1. Cell-Type Office, Traditional Space Organization

Cell-type bureau is the oldest type of bureau space organization, consists of 4 walls closed rooms that are syntax side by side. Cell type bureau in the history goes back to the Middle ages and mostly used before the 1950s. In cell-type offices, the depth of the spaces are generally 5.5-6 meters to benefit from the daylight and spaces can vary through their sizes and forms, in relation with the person they accommodate hierarchically. Cell-type offices a classical organization and generally sizes of the offices are arranged for one-person, individual usages. There are generally two types of space organization in cell-type offices, one-sided corridor system, or two-sided corridor system which offices are placed at both sides of a corridor. [2] (Figure 15)

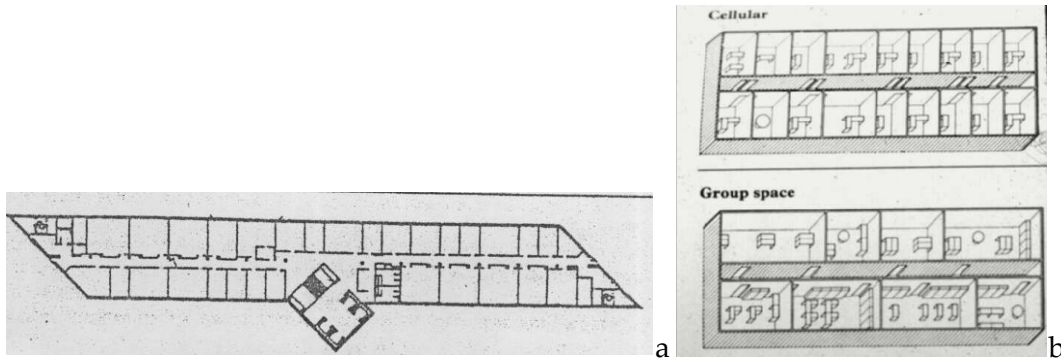


Figure 15. a) An example for cell-type bureau, b) Cellular and a schematic perspective of group working space [2]

4.3.2. Open-Plan Office Type

At open-plan offices, there are no existing strong divider systems between people sharing the space. The separation between workers and sub-spaces can be created by flowers, light panels, furniture, cabinets or decariteve patterns of floors. Open Office creates a stong interior atmosphere openly with installation of sub spaces in one big space with a weak stuructures. Open-plan offices use diverstiy of weak structures instead of brick walls, thus it's adaptable to changing conditions. In addition, by the help of short panels and dividers between workers, information fludity and communication skills become more strong than cell-type offices. [2] (Figure 16)

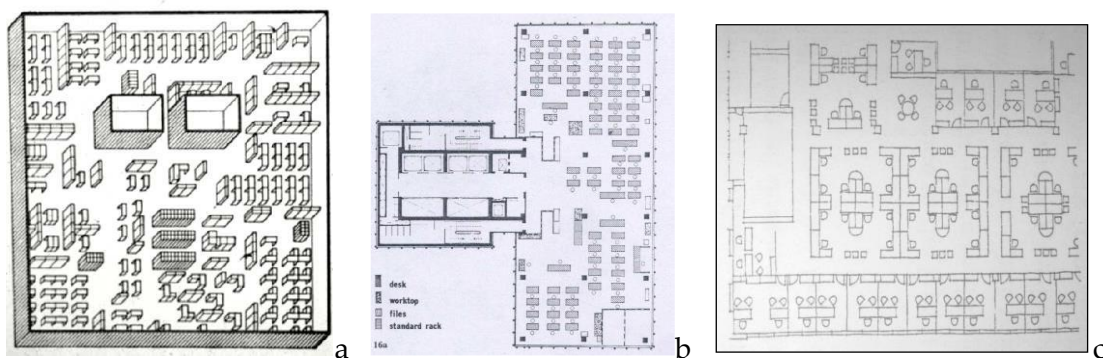


Figure 16. a) Open-office schematic perspective, b) Open-office plan example, c) Separate partitions for managers and chiefs [2]

5. Space Construction Versus Spatial Identifiers

'Architectural space is the immaterial that we define with the material. Delimiting a portion of the world in order to render it habitable; this is the very essence of architectural design' (Meiss, 2013:129). In addition, accordingly to Meiss (2013); 'the gap between ground, walls and ceiling is anything but nothingness to the architect; it is, in fact, the very basis of his activity creation of this hollow in order to contain'. This part reveals the

main difference between 'space borders & space constructions & space identifiers' [7]. At this part, the main difference between traditional and contemporary styles, between the standard and creative design, between old and new space borders have been revealed over samples. (Table 4)

Table 4. Comparison of Space Production Methods Between Traditional and Contemporary

Styles	Space Production Methods	
Traditional Style	Space Production	Syntax of Cell Type Spaces Side by Side: 4 Rigid Walls
Contemporary Style	Spatial Production	1) <u>2d Space Borders</u> -Color Difference, -Material Difference 2) <u>3d Space Borders</u> -Point-like Elements -Single Planes -U/L Type Planes -Level Changes -Convexity: Furniture Contribution -Overhead Planes -Acoustic&Lighting Equipment -3d Space Modules
	Space borders/ Space identifiers	

5.1. Space Construction Types - Traditional style of space production: enclosed rooms

5.1.1. Load-bearing interior walls system- classic space approach

Traditionally all rooms have commonly two tasks; to help the carrier system and to separate the space from its surrounding. Thus, at traditional space construction most common type is load bearing solid walls. At traditional Turkish Hayatlı of Doğan Kuban, all house plans exhibit that carrier walls that create rooms concept. [10] (Figure 17)



Figure 17. Turkish houses with traditional space constructions ; a.Uşak Güllüoğlu Evi Birinci kat planı(Eldem'den),b.Tire-Hacı Ömer Evi-Birinci kat planı (Eldem'den), c.İstanbul Fatih Köşkü-Topkapı Sarayı,15.yüzyıl-plan [11]

5.1.2. Pole System (Direklik – Sekilik)-contemporary space approach

Pole is the port between section under and over section. The pole that is placed between the entrance and the living room is not a common element of Turkish interiors. It is mostly found in the homes of wealthy families. The Pole has three openings in the middle that are wider than the sides. There are guardrails on the edges of the openings on the sides. The use of such a distinctive element enriches the spatial effect not only in terms of the architectural quality and decoration it brings, but also because it creates an effect that strengthens the division of the space into two functionally different parts. [10] (Figure 18)



Figure 18. Edremit Hacı Kabakçılar House and Kayseri – Direklik samples [11]

5.2. Spatial Construction – Contemporary Style of Space Production:

Rooms as Activity Areas

Accordingly, to Meiss V.(2013); 'Architectural space is born of the relationship between objects or between boundaries and planes which do not themselves have the character of object, but which define limits'. Thus, at spatial formations differently from classic space creation, not only 4 walls are desired but more likely scenario based occupations take action. At spatial formations; scenario/activity/function based borders occur. Thus, instead 4 walls, spatially is the best architectural solution for; flexibility, stage-like spaces, quick transformations, and adaptation to diverse activities. At spatial formation, there are no existing 4 walls that limits the space, instead any 2d design element can border the activity. A pink color on the wall can define the children play space, the wood material on the floor can define a work area, or just a suspended ceiling can define the space under. In addition, 3d borders can take place such as; a freestanding wall defines and borders the activity in front automatically, or a level change of 1 step (20 cm.) again quickly separates another activity from the main activity. The main part that distinguishes space from spatially is the occupying activity that takes place, a theater stage, or a functional area, that is defined /limited and bordered by one of the 2d or 3d spatial identifiers. Thus, spatiality is a human based, post-phenological, scenario-based, activity occupied formation and at this study there are 7 spatial identifiers that borders and limits the all different activity areas.

Spatial formations differ from traditional spaces, by the way scenario-based activity occupations come forward instead of 4 walls. At spatial formations; scenario/activity/function creates sub-spaces. Thus, instead of close cells, stage-like formations, quick transformations, adaptation to diverse activities and scenarios occur flexibly as spatiality which is the best architectural solution. At this new architectural solution; spatial formation, there are no existing 4 walls that limits the space, instead there are 2d&3d borders that limit the activity.

As a 2d border; a pink color on the wall can define the children play space, or the wood material on the floor can again define a work area. In addition, 3d borders can be diverse such as; a freestanding wall defines the activity in front and back, a level change of 1 step (20 cm.) separates another activity from the main space. In addition, furniture usage is also a very effective tool to separate spaces such as; a kitchen bar separates kitchen from living room flexibly. The main part that distinguishes space from spatiality is the occupying activity that takes place, a theater stage, or a functional area, that is defined/limited and bordered by one of the 2d&3d spatial identifiers. Thus, spatiality is a human based, post-phenological, scenario-based, activity occupied formation and at this study there are 7 spatial identifiers that borders and limits the all different activity areas.

***2D Identifiers:**

***Color & Material Changes-Spatial Density (2d identifiers):** The color effect to define a space is generally easiest way to form a different functional area with a very flexible way. Color and material changes supported with one or more spatial relation to be more effective such as; a different colored floor that is bordered by linear sticks just like Turkish House-Pole Sytem to define Hayat and sofa, doubles color effect while defining space. In addition, the difference at the ceiling as upper-head plane, again doubles the effect of color, the yellow corridor can be more perceptable with the glass ceiling over.

Color and material changes are two dimensional creative methods to indicate the effect of color to define different functional spaces, such as; yellow floor color defines a waiting lounge, and yellow color defines the corridor of the office. Last sample, color defines the entrance of a building. (Figure 19)



Figure 19. a. Slack Office, b.Studio in the woods, Madrid, c.Art Installation at the enterance door of a
restorant at Madrid (URL-2)

***3D Identifiers:**

***Point-like Elements-Spatial Integration:** The most weak structure of spatial integration is nodal elements. They can define spaces very openly but generally require a repetition of the element. Mies Van Der Rohe's Tugendthat house, one can see that repetition of chrome columns define the corridor in front of the glass facade. Point-like elements such as; columns can create space borders when they are repeated in an open space. (Figure 20)



Figure 20. Nodal forms: a. Slack Office, b. No Picnic, Stockholm, c. Onesize, Amsterdam(URL-3)

***Single Planes-Spatial Integration:** The weakest way of spatial integration is usage of single planes to define different functional space in one big space. A single plane can naturally define two sub-spaces; front and back easily and they can integrate in one big space via common spaces. In addition Mies Vna der Rohe's Tugendthat house and Barcelona Pavillon space organization is design theory of this part, such as Onyx wall defines both living room and piano room in the houses. The weakness of single plane structure can be doubled with a glass material as transparency. At the figures, single planes are used to separate work areas such as; an assembly room is defined by a transparent plane, and individual work areas are defined by planes. (Figure 21)



Figure 21. Single Planes: a. No Picnic, Stockholm, b. Office 04, i29, Amsterdam (URL-4)

***U/L Type Planes-Spatial integration:** Spatial integration comes forward at syntax of same functional spaces side by side openly with common spaces. Spatial integration can be vary from weak to strong through the shape of panel such as U is more closed and L type plane is two side open more weak structure. At the figures, U-type plane has been

used to create different spaces such as; a waiting lounge is shaped by U form plane and individual work areas that are created by U type planes. (Figure 22)



Figure 22. U/L shape planes: a-b.Slack office ([URL-3](#))

***Level Changes - Spatial Depth:** Spatial depth relation is the design theory of level changes principle. At spatial depth different functional spaces appear to be overlapping on each other, and different levels appear to be on the same space. Front space will be the first perceived and more public one and it has close relation with Le Corbusier's still life painting via overlapping. Thus, level changes are very efficient to create sub-spaces in one big space, they create a strong perception, and when different color or material used at higher level, perception becomes twice stronger. (Figure 23)



Figure 23. Level changes: a.Lenne Office, b.Slack Office ([URL-3](#))

***Convexity: Furniture - New generation 3d spatial furniture-Le Corbusier' Maison Domino house:** Convexity is the furniture ability to create sub spaces in one big space. A furniture can define space by indicating the function, for example a working table defines a work space, or a dining table defines a dining area and a bed defines a sleeping space. Le Corbusier's Maison Citroen is the design theory of this part. On the other hand a furniture can be spatial and can be three-dimensional and accommodate floor-ceiling-walls all together in its form. At figure 24 all samples are spatial furniture. At the samples it's been demonstrated that furniture can create sub-spaces in one big space. At the figures the effect of furniture have been indicated such as; a) a rest and work niche in the wall, b) spatial multifunctional work space which includes side walls as book shelves, c) 3d workspace created in a two sided white box. (Figure 24)

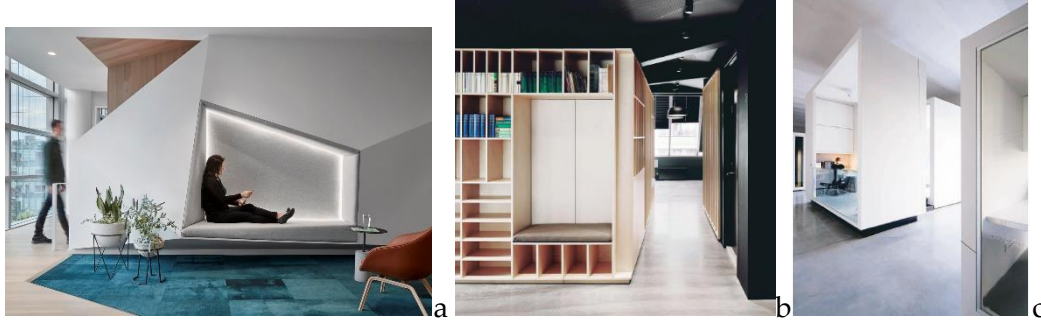


Figure 24. Spatial furniture: a.Slack Office, b.Bergen Int. Festival, c.Goldberger Budapest (URL-3)

***Overhead Planes - Spatial density:** Over head planes can create a great perception and easily define the space under very flexibly. Spatial density relation is the design theory of this part, as the unitary space of Cordoba that floors-ceilings are defined by decorative patterns and can can be empty or full. The Rectangular ceiling emphasizes assembly table and a circular ceiling defines waiting lounge under it. (Figure 25)



Figure 25. Overhead planes: a. Private Equity Firm, Munich, b. Saatchi + Saatchi, Culver city, USA[17]

***Acoustic & Lighting Equipment - Spatial density:** Spatial density relation is the design theory of this part, as the unitary space of Cordoba that floors-ceilings are defined by decorative patterns and can can be empty or full. Special lighting design can act like a ceiling and can easily define space under it. Figures are related to the lighting that create space. (Figure 26)



Figure 26. Acoustic and Lighting equipment: a.Ymedia, Wink and Yperform Madrid, b. Engine, London [17]

***3d Space Modules-Spatial Integration:** 3d space models are generally spatial furniture designs and accommodate all floors-walls-ceilings within their borders. They can vary through their forms and functions, and can also vary for individual usages or crowded. Their constructions are generally simple like prefabrication in a creative way. They have steel, or wood panels as walls, furniture or basement base for floors and light upper-head planes with spot lights as ceilings. They are commonly weak structures by %50 closed side panels, thus they are permeable structures which perception degree is very high. 3d space modules (structures) create space room-like space borders including walls-floors-ceilings all together in a distinct 3d form. (Figure 27)



Figure 27. 3d space modules: a.Slack Office-wooden, b.Slack Office- metal tubes are used to form transparent walls (URL-3)

6. Conclusions

In the study, it's mainly aimed to demonstrate creative and flexible concepts of contemporary interiors that are formed by spatial design. Spatial design, which is scenario-based space formation, creates flexibility in interiors. In the study, 7 spatial identifiers have been introduced with contemporary samples and classified as 2d and 3d identifiers. 2d identifiers, as color and material changes, are the most flexible way to define sub-spaces and uses 'perception' in a strong way. On the other hand, 3d identifiers are generally volumetric separators and define 2-3 or more sub-spaces such as; a single plane defines two space (front and back), pointless elements (columns) divide a big space into four parts. On the other hand, U/L shape planes create niche-like spaces that are more close formations. 3d space structures define more closed spaces in an aesthetic way and create sculptural spaces in one big space, they have high artistic effect. Lastly, today's interior designs demonstrate that furniture exhibit spatial features when compare to the past and more complex today. Today, furniture design exhibit 3d features and commonly include multi-functional usages and spatial.

Major findings of the study can be summarized as;

*Contemporary style of space production requires new spatial construction methods which are introduced as; depth – integration – density relations

*Spatial identifiers have two classifications: 2-dimensional (color & material) and 3-dimensional volumetric identifiers

*2-dimensional identifiers; as color and material changes indicates spatial density relation and defines spaces in a very flexible way , they have ability to create a great visual perception in one big space and separates space from environment, in addition they can be supported with other spatial identifiers such as; linear sticks or ceilings

*3-dimensional identifiers; pointlike elements are the most weakest space structures and create spatial integration. They can define spaces very openly and generally require a repetition to draw the borders.

*Single planes; Second weakest way of spatial integration is usage of single planes to define different functional space in one big space. A single plane can naturally define two sub-spaces; front and back easily and they can integrate in one big space via common spaces.

*U/L type planes; creates integration of spaces by placing side-by-side openly.

*Level changes; creates spatial depth. At spatial depth, different functional spaces appear to be overlapping on each other

*Convexity: Furniture - new generation 3d spatial furniture-Le Corbusier' Maison Domino house: Convexity is the furniture' ability to create sub spaces in one big space. A furniture can define spaces by indicating the function. Le Corbusier's Maison Citroen is the design theory for this. In addition, a furniture can be spatial with floors-ceilings-walls all together in its form.

*Overhead Planes - Spatial density: Over head planes can create a great perception and easily define the space under very flexibly. Spatial density relation is the design theory.

*Acoustic & Lighting Equipment - Spatial density: Spatial density relation is the design theory of this part.

*3d Space Modules-Spatial Integration: 3d space models are generally spatial furniture designs and accommodate all floors-walls-ceilings within their borders. They are commonly weak structures by 50% closed side panels, thus they are permeable structures which perception degree is very high.

Thus, it's aimed to reveal space formation of contemporary interiors with these new spatial identifiers that transforms space construction to spatial construction. Analyses of selected samples have been emphasized that spatial design contribute flexibility to space organizations, based on scenario and activity type, and separates different functional sub-spaces in an open space by using spatial identifiers.

To sum up, in the study it's aimed to reveal differences between traditional and contemporary style construction methods which transforms space construction to spatial construction. The most important part is that spatial construction or spatial design brings creativity and flexibility to space organizations, based on scenario and activity, separates different functional sub-spaces in an open space by using spatial identifiers and creates diverse occupations.

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b. Barcelona Pavillon, the onyx-wall is active; one side living area the other side piano room (source:
https://www.archdaily.com/109135/ad-classics-barcelona-pavilion-mies-van-der-rohe/54c6a744e58eceb2c7000001-mies2-jpg?next_project=no)