



Architectural Collage, an Applied Design Method for Landscape Urbanism

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Abstract

The article discusses “Architectural Collage” method application as a design technique for Landscape Urbanism. Landscape Urbanism is a contemporary mode of urban design that uses the mutable conditions of landscape as the foundation of urban plan and form. Although it has been the topic for many research works, no practical method is suggested for its implementation. Collage method, due to its philosophical affinity with Landscape Urbanism, can be a proper means to this end. Despite usual design methods, collage emphasizes the role of imagination and cognition in a multidisciplinary inverse process; where the ideal design outcome is depicted at the beginning of the design process. After shaping pictorial compositions with chosen fragments, the three-dimensional mockups based on the collage are made; consequently, the exterior form shapes compliant to the interior spaces. In other words, the function shapes the form by considering numerous layers of disciplines, functions, standards, ecology, and spatial quality. Initially, a comparison is made between previous urban policies, which led to formation of Landscape Urbanism. Afterwards, the similarity of collage philosophy with Landscape Urbanism is discussed. Finally, the article examines the implementation potential of collage through a case study already designed by this method. It is likely that collage can serve the goals of Landscape Urbanism. This method generally targets the students and professionals of Architecture, Landscape Architecture, and Urban Design; and can function as the complementary element for the use of Landscape Urbanism in contemporary urban projects.

Keywords: Landscape Urbanism; Architectural Collage; Urban Policy; Urban Design; Multidisciplinary.

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1. Introduction

Cities and regions have different capacities and capabilities to respond to national and global initiatives to create a holistic context for economic and ecologic globalization [1]. While debates around economic, social and ecological reproductions have historically been viewed as interrelated [2,3], the structural change in contemporary cities, require the old paradigms to adapt to emerging new patterns [4]. Landscape Urbanism can be a lucrative solution to the critical problems cities encounter nowadays. It offers a process oriented and multidisciplinary way to consider the complex urban conditions related to urban infrastructure, water management, biodiversity, and human activities; and examines the bilateral interactions of the city and landscape [5]. Architectural Collage method has the same integrated approach as Landscape Urbanism. A collage is the assembly of various forms and fragments of materials, combined into a composition that has a new meaning, not inherent in any of the individual fragments [6]. As a design method, it has been broadly used in architecture and landscape architecture and has a creative routine. The methodology of collage is described through the design phases of a real project. Underground placement and the necessity to harmonize with the existing context, were the main challenges and limitations of this specific project. However, collage method made it possible to depict the result at the beginning of the process, considering all limitations and conditions, and to follow the rest of the stages based on the initial abstract compositions. The limitation of this study is the small number of real projects designed by collage. It is still not broadly applied in academics as well. Therefore, it was not possible to make a comparison between a great number of collage-based projects to exact the advantages and disadvantages of this method. The other constraint was the limited number of published works on the practical stages of implementing collage in architecture and urban design. Hence, the methodology used is an experimental one based on collage philosophy in related fields.

The research questions are:

- Can the result of this specific case study be generalized to issues related to Landscape Urbanism and urban problems?
- Can collage method serve the goals of integrity, multiplicity, generality, and wholeness of Landscape Urbanism?
- Are there specific steps and methodology to implement an urban design concept through collage method?

1.1 Literature review

Global in scope but generated and manifested locally, effects of a radical break from past trends in political, economic, and sociocultural life are creating the geographies of postmodern city fabric [7]. Cities now look different, that the new urban form is difficult to adapt the old policies [4,8]. Hence, it is necessary to develop new urban paradigms that meet the needs of contemporary cities. To indicate the development path of Urban Policy models, the paper will outline the fundamental precepts of the Chicago School, a classical modernist vision of the industrial metropolis, and contrasting these with the postmodern Los Angeles School, which established the polycentric urban models after the monocentric era.

1.1.1 Chicago School

Most twentieth-century analyses were based on the Chicago School model of concentric zones, sectors, and multiple nuclei theories of urban spaces [7]. A uniform land surface, universal access to a single-centered city, free competition for space, and the development outward from a central core, shaped the city as a series of zonal or concentric rings. Chicago School focused on the social relations generated by territoriality [9], invasion, succession, and segregation [10, 7]. Haig (1926) emphasized that the strong complementarity between rent and transportation costs has remained at the heart of analyses of urban structure. Further expanded by Wingo (1961), Alonso (1964), and Muth (1969), the underlying thesis of the empirical work was that the monocentric city is the outcome of competition for accessibility [11,12,13]. Examining population density gradients and land value gradients showed that the monocentric model was a good fit to empirical data in Chicago [14]. Hence, the Monocentric model can be an epitome of Chicago School Urbanism.

1.1.2 Los Angeles School

“Every single American city that is growing, is growing in the fashion of Los Angeles, with multiple urban cores” [15]. What was happening in the Los Angeles region was somehow symptomatic of a broader socio-geographic transformation taking place globally, due to the growth of cities, Jobs and services; which caused the spreading of residential communities to outlying centers far from traditional downtowns [16]. The Los Angeles school, which is in a harmony with postmodernism philosophy [17], represents a centerless urban form consisting of a global-local connection, a ubiquitous social polarization, and a reterritorialization of the urban process in which hinterland organizes the center (in direct contradiction to the Chicago model) [7]. Such urban structure is a complicated quilt, fragmented, yet bound to an underlying economic rationality [18]. In polycentric Postmodern cities, nodes and transportation system, structure of metropolitan areas, and the work–residence linkages are changing, which leads to more crosstown, and reverse-direction commuting [4].

1.1.3 Postmodern Urbanism

Twentieth-century urbanism involves a premodern transitional period (up to 1940); an era of modernist cityscapes (after 1945); and a period of postmodern townscapes (since 1970). Postmodern townscapes are more detailed, handcrafted, and intricate. They celebrate polyculturalism and variety reconnected with the local (involving deliberate historical/geographical reconstruction) [19]. Contemporary urbanism is a consequence of how local and interlocal flows of material and information intersect in a rapidly converging economy, indicating a radical break in the conditions of material world. Despite of the concept of the city as an organic accretion around a central proposed by Chicago School, the urban periphery organizes the center in a postmodern urban process; especially through the telecommunications revolution, the changing nature of work, and globalization. Cities no longer develop as concentrated loci of population and economic activity, but as fragmented and polarized parcels in a collective world city [7].

1.1.4 Landscape Urbanism

While the urban design and planning realm has been slow to recognize the increasing importance of environmental factors, at the dawn of the 21st century, landscape urbanism draws together the infrastructural intensities of “territory, communication, and speed” and the “explicit” deployments of ecological efficiencies. It

is a contemporary urban design mode that uses the mutable conditions of landscape as the foundation of urban program and form. Landscape Urbanism examines the implications of the city in the landscape and landscape in the city [5]. Landscape Urbanism is based on Rhizome Theory borrowed from plant science by French philosophers Gilles Deleuze and Félix Guattari in the mid-1970s. It describes the open, horizontal growth of underground tuber systems like common weeds [20, 21]. In contrast to the hierarchical Tree thought and its concentration around a trunk, where relations of the parts are pre-established and fixed, rhizome thought does not have a center and connections are flexible between disparate parts [22]. In describing city networks, rather than a singular city, Smith emphasizes how the rhizome allows for a conceptualization of cities that is focused on multiplicities. They are in constant movement, undergoing a series of transformations and translations [23]. These diverse heterogeneous events bring together activities and communities that are ostensibly unconnected [24]; as we can see in the six principles of the rhizome that are namely connection, heterogeneity, multiplicity, a signifying rupture, cartography and decalomania [25]. Urban practices that shape urban multiplicities, as well as crystallized subcultures, may also exist in a non-linear, non-progressive manner [25, 26]. The rhizomatic urban theory co-constructs a reality yet to come, currently formless, distributed in the activities, imagination and improvisation [27, 28, 24]. Urban design proposed that the city was an aggregation of buildings. Architecture was seen as fundamental to the city not only as a constructed asset, but also as a social and cultural one. Instead of using buildings as the medium of design, Landscape Urbanism focuses on landscapes- infrastructure, public space, and open space [29,30]. Landscape Urbanism has some important traits:

- **Landscape Urbanism is synthetic**, combining urbanism, infrastructure, ecology, architecture, and landscape architecture in a single design strategy [29,5]. Landscape Urbanism is where design culture intersects with ecological knowledge- synthesis and union between models of the natural world and the shape of the city- that is an essential difference from previous similar forms of practice [5:33].
- **Landscape Urbanism is temporal**, designing for change and viewing, and in James Corner's words, 'form as a provisional state of matter'. The movement away from fixed, linear, mechanistic models complicates the development of solutions [5:29-30,29].
- **Landscape Urbanism is contextual**, drawing on a project's ecology, climate, and culture and including all manner of engineering, especially traffic and storm water [29]. Landscape, as a way of theorizing cities, provides ecological metaphors such as field conditions, urban scape, or matrices; it frames the perception of cities as dynamic, self-organizing systems; and it guides the design of cities, through cultural and operational ecological processes [31, 32].
- **Landscape Urbanism is resistive**, using the specifics of local place to ground global building processes. The forces that historically have made cities- production and exchange of goods and services-are increasingly patterned as networks rather than loci. To the extent that landscape urbanism is a set of practices, then it is not connected to one particular culture or geography and any shift in the relationship of the structure of capital or power will impact urbanism [29, 33].
- **Landscape Urbanism is multiscalar**, using processes rather than forms as the basis of design, which allows ideas to translate from one scale to the next, and across disciplines [29]. Landscape is a way of both perceiving and conceiving the city, which are systems of exchange, not places. Landscape inquiries inherently deal with networks, with process, and with change over time [30].

1.1.5 Landscape Urbanism Practical application

Most innovations or urban paradigm shifts address a set of questions, a set of scales, and a set of tools or methods particular to the place that they are responding to and, as a result, often end up working at very different scales [33]. Landscape urbanism tries to understand the massive complexity of the world that we live in, to work collaboratively with other disciplines to produce solutions that are respectful to sites and inhabitants, and create new urban spaces that contribute to the wider natural and cultural territory. Its ability to recognize, embrace and transform poetic gauge of environmental processes suggests a way to design authentic and innovative places [34]. Instead of the automatic adoption of technical solutions or ineffective policies, landscape becomes the ‘modern glue that holds the modern metropolis together’ [35]. Landscape urbanism is commonly characterized as an approach, study, or way of thinking about the contemporary city [5]. Landscape Urbanism framework ranges from straightforward to abstract research, but generally stems from a sense that landscape can be used as a model and basis for urban initiatives, and a lens through which to examine our cities [36]; however, no one method is yet prevailing and built examples of landscape urbanism are still rare. The formal outcomes of projects that rely on process are difficult to predict, in a way that often appeals to professionals and people beyond the field [37]. However, society begins to tolerate and embrace the ideas of uncertainty, process, and design complexity in already intractable and attenuated urban settings [5]. This article suggests Architectural Collage method, with philosophies that are in a great affinity with the Landscape Urbanism, as a potential practical method to implement Landscape Urbanism goals in contemporary cities. Due to the important role of imagination, creativity, integrity and multiplicity in collage method, it can serve as an apt process-based approach that delineates the outcome at the beginning of the design process and solves uncertainty problem.

1.1.6 Architectural Collage

A collage as a work of visual art consists of the assembly of various forms and fragments, combined as a whole that has a new meaning, not inherent in any of the individual fragments, with a purposeful incongruity and reciprocal relations [6, 38]. It suggests new narratives, dialogues, juxtapositions and temporal durations. Its elements lead double-lives; the collaged ingredients are suspended between their original essences and the new roles assigned to them [39]. Collage, as an art form unique to the modern era, emphasizes process over product, as the process of construction remains evident in the resulting work [40]. Collage focuses on perceptual concepts that deal with the abstract; hence, emphasizes on the role of imagination and creativity in a design process [41]. Techniques of collage were first used in China around 200 BC and later prospered in various forms globally. However, the term “collage” was coined at the beginning of the 20th century by the founders of Cubism, Pablo Picasso, Georges Braque, and Juan Gris [40, 42]. During the second half of the eighties, Francisco Javier Sáenz de Oiza designed The Atlantic Center of Modern Art in Las Palmas (1985-89) and the Alhóndiga Cultural Center in Bilbao (1988-90) ,over a previous existing building, based on collage and decontextualization theory of Rowe [43,44]. There are also remarkable examples of collage application in Landscape Architecture. Hamar Bispegaard Museum in Hamar, Norway (1973) by Sverre Fehn is a three-dimensional palimpsest, revealing distinctive yet overlapping layers of history and construction. Roberto Ercilla Arquitectura’s Fundación Sancho el Sabio (Vitoria-Gasteiz, Spain, 2008) is a reappropriated landscape that has been reactivated by the processes of disassembly, fragmentation, and synthesis for the creation of a dynamic

cultural space. Collage and assemblage are favored techniques of visual artistic representation in our time; these media enable an archaeological density and a non-linear narrative [45].

Jenifer Shields, in her “Collage and Architecture” book, classifies collage in the following groups [40]:

- Collage as artifact
- Collage as a tool for analysis and design
- Architecture as collage.

The latter emphasizes the role of architecture as a frame and a setting for human activities that turns it into a varying and variously completed entity, and an ever-changing collage of activities, furnishings and objects. Most of our historical buildings are assemblies of alterations, materials, textures and colors layered through decades or centuries of use [46,47]. The practice of collage has the capacity to capture spatial and material characteristics of the built environment, acting as an analytical and interpretive mechanism and a design methodology that pursues a multi-sensory experience in a work of architecture [40].

1.1.7 Collage as Urban Design

Throughout the 20th century, photography and collage have accompanied the evolution of both architecture and the postmodern city, portraying them and creating urban thought conceived in their visual representation [48, 49]. ‘A city is never seen as a totality, but as an aggregate of experiences, animated by use, by overlapping perspectives, changing light, sounds, and smells.’ (Holl, 2006). Collage can reflect the spirit of the era as visual compositions of cities. All the key elements and layers that need to be considered in urban design can come together as a whole in a collage, which is an instrument for analysis and design offering a diverse set of materials, techniques, and conceptual procedures from which to draw inspiration. It encompasses a number of dualities such as old/new-urban bricolage through which the old elements are maintained-, present/past, representational/abstract, gestural/precise, field/ figure, surface/depth, and literal/metaphorical [40]. Diane Waldman claims: ‘The technique of collage was ideally suited to capture the noise, speed, time, and duration of the twentieth-century urban industrial experience. Collage became the medium of materiality’ [50, 44]. This approach is not merely applicable in American cities; as Bilbao was named “the great collage”, since there is no own architectural style, but a tendency to accumulation and overlap the varieties [43].

1.1.8 Collage Philosophy and its Affinity with Landscape Urbanism

Collage, emerging from our unconscious and hidden memory, reflects most deeply felt experiences, memories, thought processes and motivations that have not been consciously reflected upon, felt, and understood [51,52, 53, 54]. Collage takes social relations and personal emotions as a starting point and have the potential to promote interaction between the buildings and their users [55]. Collage making is about the opportunity images open up for the designer to explore the subtleties of experience in creative, non-linear ways [52,56]. If we seek deep in our needs and expectations of an ideal architecture or urban space, we can design those that are fully functional and efficient. Instead of focusing merely on design standards and feasibility studies, we could delineate the ideal expected result at the beginning of the process and try to match it with our needs.

Consequently, the spaces will be favorable and soulful. It is also lucrative due to considering experiences, making connections between them, considering different design layers, potential to support elicitation, and linking thoughts and feelings to produce a nuanced picture of the expected urban space [57, 58]; such potential is bereft in conventional design methods of art, architecture, and urban design.

Practice of collage has key dimensions:

- **Flexibility:** the freedom to move materials and reach different answers
- **Independence of the designer:** by reflecting his inner thoughts and cognition rather than being inspired by established rules
- **Wholeness:** the integrated result at the end of the process;

Which are in a great harmony with the philosophy of Landscape Urbanism. Berger (1972) suggests that one of the fundamental features of art is its ability to be read as a whole, to be understood in its entirety, rather than in a piecemeal fashion [51]. Collage provides a holistic presentation, and thus a deep understanding of the complexities of the Urban Design. Butler-Kisber and Poldma (2010, p. 3) identify three uses of collage in qualitative and pragmatic approaches - as a reflective process, as a form of elicitation, and as a way of conceptualizing ideas-which indicates Collage's capacity to act as a reflective process [59].

2. Methodology

Collage methodology is presented through design process steps of a Tourism and Entertainment Complex for Qariz Underground City located in Kish island, Iran. The design site is located underground, in a -14.00 meter altitude, with a malt and lime soil foundation. There is a neighboring underground city that is a cultural heritage site. Hence, the new complex should have been designed with respect to the heritage and its context. The lack of natural light and passive air condition systems were the critical problems needed to be solved through the design proposal. In addition, the complex needed to be welcoming and appealing to the tourists and provide physical program requirements. Step 1. In order to make a collage, first, pieces of images are collected from magazines and architecture books, with no regulation except personal taste. This is the stage when the unconscious memory rules the traits of chosen pieces. This is the beginning of producing subjective images of architecture made from fragments of reality [60]. Step 2. The pieces of images are placed next to each other, creating a pictorial composition. The collaging experience offers the potential to try things out, to move pieces around and thus to create a new way of expressing either original thoughts or new ways of seeing, stimulated through the making process itself [61]. However, the direction is to 'place' rather than 'stick' chosen objects, which is not an arbitrary process. The fragments typically do not match perfectly, and they are allowed to overlap each other [62]. The result is a two-dimensional image that represents a three-dimensional architectural space. Although none of the principles of perspective and scales applies, it can depict an abstract and complex internal or external space. In the case study, the design started with the internal architecture. Believing that the function should shape the external form of a building, most of the architectural collages start with the interiors.



Figure 1: Collage #1



Figure 2: Collage #2



Figure 3: Collage #3

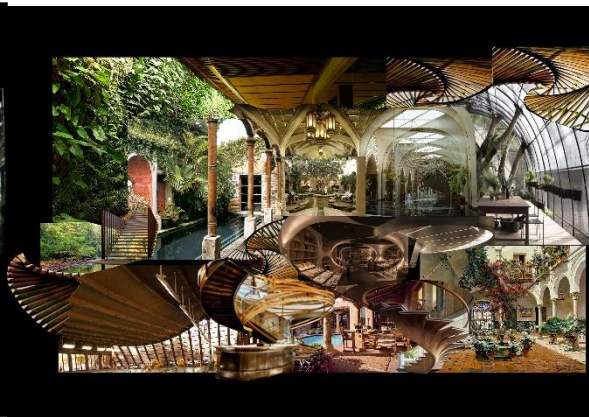


Figure 4: Collage #4

The designer tells an experimental story by his collage [63]. Whether his purpose is to stay loyal to the dominant architecture of the context, creating an utterly different design, or adding new elements to the space, the collage depicts the ideal spatial design he imagines. In my case, I went with the latter approach; although Kish island is filled with palm trees and green spaces, surprisingly no green zone exists in the site of Qariz. For a tourist arriving there in the hot and humid weather of the island, it would be nice to chill and relax in a cool area surrounded by trees and green zones. Also, as the design site was located under the ground- in a -14.00 meter altitude-, only artificial lightings were applied; hence, I believed that the presence of sunlight should be much more significant, both for energy saving purpose and creating a lively space. I made six collages all of which had elements of sunlight and green zones. Another interesting fact about collage process is that all the outcomes are harmonized in terms of dominant colors, shapes, and composition. It is because collage is reflecting the designer's inner world in all his attempts; no matter how many individuals design for the same issue, the outcomes will differ utterly based on their tastes and characteristic Step 3. In order to gain a better understanding about the features and structure of each collage, various aspects of them are analyzed; Including formal and line type, materials, altitudes and surfaces, plan hierarchy and colors analysis. This step can be done by hand or computer software to distinguish the spatial components and their relations.

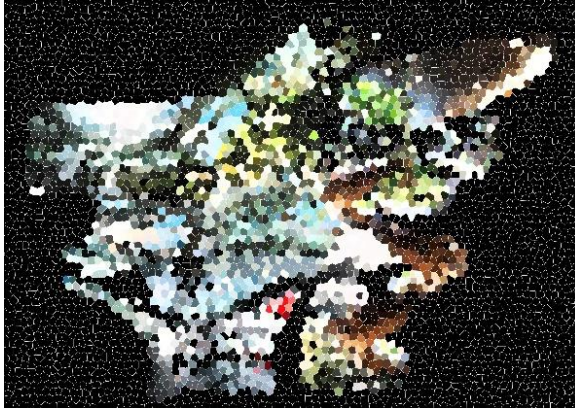


Figure 5: Color analysis



Figure 6: Light analysis

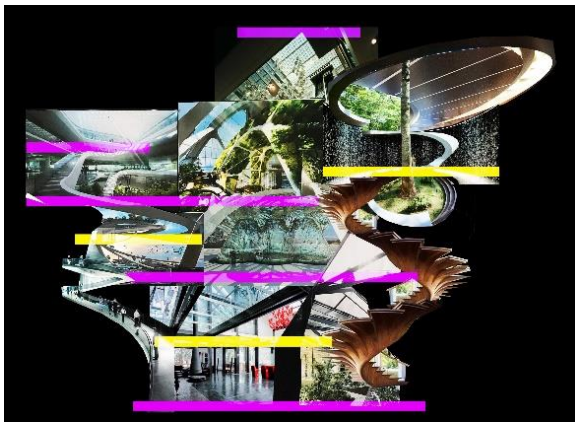


Figure 7: Level analysis

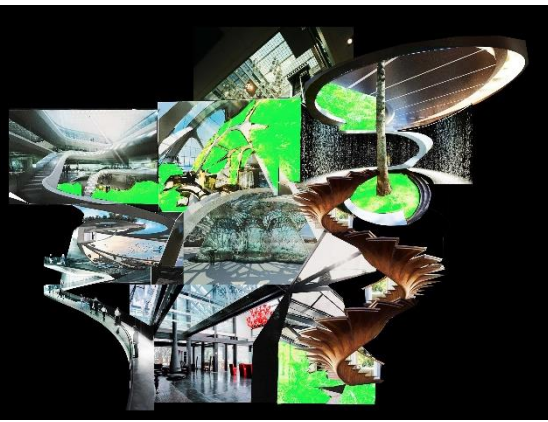


Figure 8: Green zone analysis

Step 4. After analysis, the collages are placed three meters away from the viewer, who sketches based on them. This is in fact the first step in transforming the abstract subjective image into objective reality; it is an attempt to understand the spatial relationships, levels, forms, dimensions, and proportions in the image and translate them into the language of architecture. Collage abstract nature, abrupt changes of viewpoint, freedom from perspective, place and time cause multiple comprehensions of it to be made by the designer or other individuals [64].

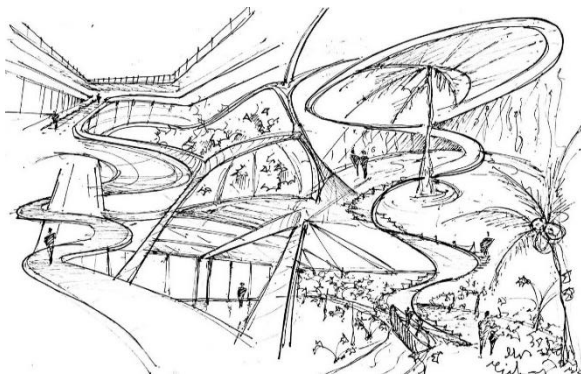


Figure 9: Sketch of Collage#1

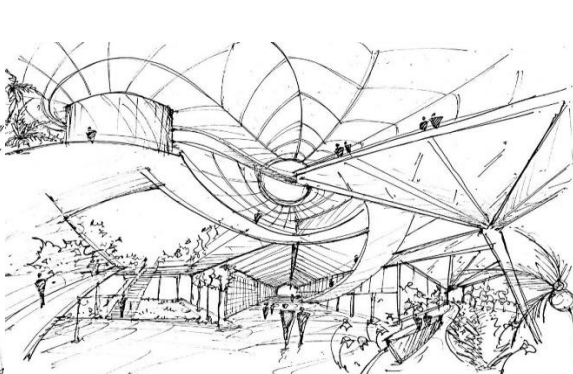


Figure 10: Sketch of Collage#3

Step 5. At this stage, three-dimensional mockups are made manifesting the abstract spaces in the collages. The sequence and hierarchy of spaces and the communication between them must be made intricately, that when the replica is placed in eye level, the same perspective of the collage can be seen. Mockups and collages bilaterally complete each other. In subsequent attempts, it is possible to combine two or more collages for mockups. Landscape and surrounding context should be added to the mockups to indicate the accessibilities and placements in the site.

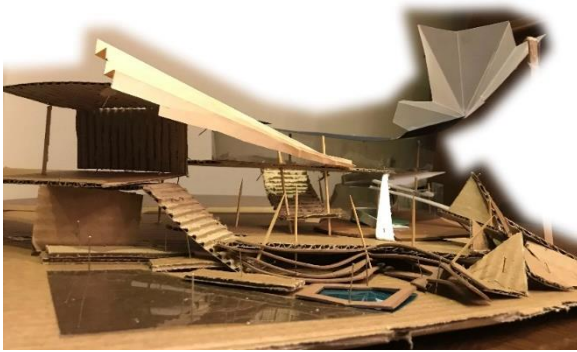


Figure 11: Interior mockup for Collage #2

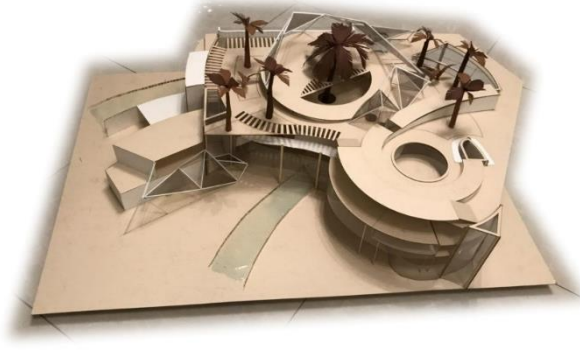


Figure 12: Mockup of final project and its landscape

Step 6. Architectural drawings are made based on the three-dimensional mockups in a reciprocating process. Drawings play an important role in design process [66]. Architectural drawings and mockups are complementary and lead to a thorough and detailed design. The design starts from the interior space, with an emphasis on the function and the spatial quality. In this phase, the structural system, axis and design standards are added to make building constructible. Sections and elevations are drawn after the plan to indicate the vertical connections. Strong correlation between the collage, the mockup, and the architectural drawings is vital to represent the ideal place the designer depicted at the beginning of the process.

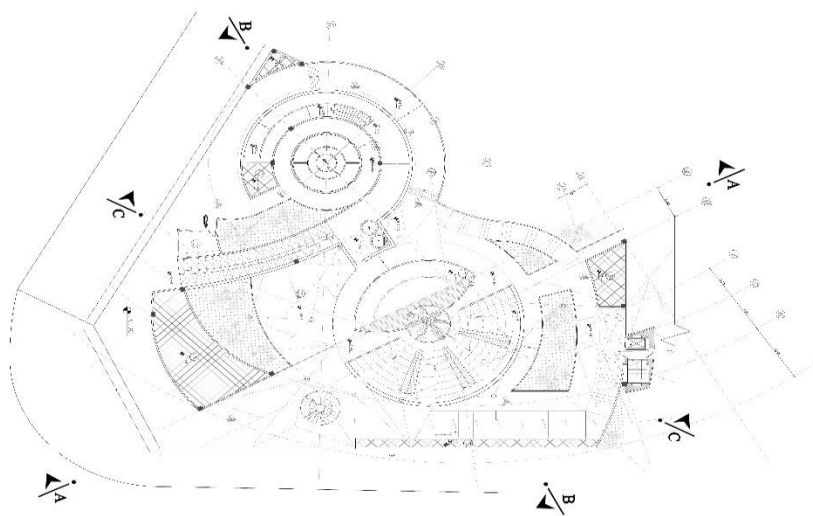


Figure 13: Site plan

Step 7. After the drawings are completed, the internal volume is modeled by computer. I used Rhinoceros and 3D max to model and render the tourism and entertainment complex. This provides the opportunity to accurately calculate the volumes and levels, as well as to observe the form from different viewpoints, and to fit the plan and shape precisely. It is also possible to place the building on the existing site, control the structural standards, rescale the elements, detect clashes, and add meticulous details.



Figure 14: Section C-C

After interior design is completed, external form options are suggested. The main challenge is to provide a model that is consistent with and reflects the internal architecture. Attention to human scale, sky line, rhythm in the facades, materials, colors and visual corridors are also critical factors in exterior form designing.



Figure 15: Northern elevation

Step 8. As collage is a potent design method in various fields, the landscape can also be designed by this method. Instead of choosing architectural and internal space pieces, the designer should focus on natural elements. This type of collage can be a link between Landscape Urbanism and collage methodology; since it suggests a centerless, multilayered, dynamic, and abstract urban space. It also provides the opportunity for the designer to choose between the potential outcomes by comparing made collages. Hence, the uncertainty of Landscape Urbanism approach can be solved by collage method



Figure 16: Interior architecture of Collage #1



Figure 17: Interior architecture of Collage #2



Figure 18: Landscape architecture of the project site

3. Result

The outcome of the case study-the tourism and entertainment complex of Qariz underground city- is a creative, multilayered, dynamic, ornate, and congruous space, which represents the essence of the collages. It is also in harmony with principles of Landscape Urbanism. The outcome matched with the surrounding context of Kish Island in a -14.00 meter altitude, a malt and lime soil foundation, and the hot and humid weather, by operating light and fresh air shafts already depicted in the collages. By implementing plants and using natural lighting, the energy usage of the project declined; thus, it can be named a sustainable and ecology friendly project. It also encompassed all the required areas of the spatial planning. The project adapted with the surrounding landscape by adding what was missing in the initial context. Green zones, an outdoor amphitheater, stalls, and an opening gate made the complex intriguing to the tourists. It also spreads on the horizontal surface, just as rhizome does, although having multiple layers underneath the ground. The conclusion of this examination is that collage method can utterly meet the needs of a city-scale project with numerous sub-spaces, layers and details.

4. Discussion

Applying collage method in design process brings a number of important traits to the result. As it was mentioned in the collage philosophy section, it is a flexible and creative method that is intertwined with unconscious and hidden memory of the designer. Therefore, it benefits from mental layers of the designer and its process based design thinking. One's imagination is borderless, as is the landscape. Landscape Urbanism also benefits from multilayered and process based thinking with an emphasis on landscape. Below, main attributes of Landscape Urbanism and their corresponding responses of collage method are listed. Both the attributes and the responses are based on previous scientific works [5,29-33] and expert judgement on samples designed by this method.

Referred to Table 1, collage covers main attributes and realms of Landscape Urbanism. On the other hand, collage is a practical method, which Landscape Urbanism lacks. Hence, it can serve as a practical design method for Landscape Urbanism.

Table 1: Correspondence between Landscape Urbanism attributes and Collage method’s responses

Landscape Urbanism attribute	Collage method’s response
Synthetic	Collage consists of fragments linked to each other
Multiscalar	The variety in the size and scale of fragments produce perspective and dept. Also collage can be implemented in designing projects of various scales and functions.
Contextual	It adds new elements to already existing context by respect to it [43].
Temporal	Collage is ever changing and new notions can be inspired by it.
Holistic	All the fragments represent a general picture at end with a great unity.
Operational	It creates a bridge between subjective imagination and objective reality, and presents the terminal practical function and form.
Imaginative	It is directly connected to imagination and cognition and is emerged from human’s unconscious.
Process-based	Collage emphasizes the process in which ideas are developed as a linear process or a series of creative digressions [65].

5. Conclusion

Architectural collage method, as a process-based, innovative, and multidisciplinary approach, can be a proper practical method for Landscape Urbanism; both in individual projects and large-scale urban projects. It serves the goals of flexibility, fluidity, transformation, horizontal spreading, sustainability, ecological consideration, congruity with context, and wholeness; all of which are fundamental in Landscape Urbanism. As Landscape Urbanism is rapidly establishing in contemporary cities, collage method, which eradicates the uncertainty of the process, can be an apt design means for our ever-shifting, synthetic, complicated, and multilayered cities. As Rowe promotes the idea, ancient city is not destroyed to make way for the modern city, as the Modern Movement had intended. A collage city is somewhere disorder, the citizen and the traveler, the simple and the complex, the private and the public, the utopia and the tradition all have a place in; in which elements from different eras and cultures are combined, establishing a dialectic between past and future to create novel meanings inspired by the context[43]. Since collage is a visual method, easily comprehended, it can prosper the outlook of Landscape Urbanism both in academic and professional settings.

6. Recommendation

The design methodology presented in this article can be prospered in broader areas. Although the application of collage in urban setting has not been as comprehensive as in architecture, there is a huge opportunity for it to be one of the most common design techniques, due to being abstract, patent, and analogical. Hence, the framework to implement this method in urban design problems can be a potential future research topic. In addition, research on strategies and challenges of collage implementation in general is a research topic that needs further studies. By the growing rate of collage deployment, future research will be able to compare numerous projects designed by this method. This approach is advantageous, since it can shed light on the imagination and creativity factor in real designed projects, which collage is emphasizing. Also, the greater the number of designed projects the more precise the judgement will be.

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