

A DESIGN APPROACH IN ARCHITECTURAL EDUCATION: PARASITIC ARCHITECTURE

Mimarlık Eğitiminde Bir Tasarım Yaklaşımı Uygulanması: Parazit Mimarlık

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ABSTRACT

Throughout the architectural education, it is aimed to provide students with the ability to find original solutions to current problems. In this sense, workshops that provide creative thinking within the action, experiencing the environment and finding instant solutions to problems have an important place in the education process.

Parasitic architecture, which is a contemporary design approach in the architectural agenda, includes small scale designs integrated into the carrier system of existing structures in spaces of the existing urban fabric which resembles the host-parasite relationship in the biology field.

The scope of this study consists of a 12-weeks long experimental workshop of the "Parasitic Architecture", which was designed within the scope of Basic Design 2 course of the Department of Architecture of Çukurova University in the 2017-2018 academic year. In this study, parasitic architecture was discussed as a space design method. Students analyzed the campus of the Çukurova University and draw sketches to identify gaps in it. During the workshop, the function-form-context relationship was discussed. The output products were evaluated within the context of urban spaces / gaps, functional requirements, and students gained awareness not just about the urban occupancy but also gaps.

Key Words: Design Approach, Parasitic Architecture, Experimental Workshop, Architectural Education.

ÖZET

Mimarlık eğitimi boyunca öğrencilere, güncel problemlere özgün çözüm bulma yetisinin kazandırılması hedeflenmektedir. Bu anlamda, eylem içinde yaratıcı düşünme, çevreyi deneyimleme ve sorunlara anlık çözüm bulma kazanımını sağlayan atölye çalışmalarını eğitim sürecinde önemli yer tutmaktadır.

Mimarlık gündeminde güncel bir tasarım yaklaşımı olan parazit mimari, biyoloji alanında var olan parazit organizmaların konakçı ile ilişkisine benzer bir oluşum ile mevcut kent dokusu içerisinde yer alan boşluklarda, mevcut yapıların taşıyıcı sistemine entegre olan küçük ölçekli tasarımları kapsamaktadır.

Bu çalışmanın kapsamını, Çukurova Üniversitesi Mimarlık Bölümü 2017-2018 eğitim öğretim yılı içerisinde Temel Tasarım 2 dersi kapsamında kurgulanan 12 haftalık "Parazit Mimarlık" konulu deneysel atölye çalışması oluşturmaktadır. Çalışmada parazit mimarlık, bir mekân tasarımı yöntemi olarak ele alınmıştır. Öğrencilerden Çukurova Üniversitesi Kampüsü'nü analiz ederek, eskiz çalışmalarını ile boşluklar belirlenmiş ve atölye sürecinde işlev-form-bağlam ilişkisi tartışılmıştır. Sonuç olarak ortaya çıkan ürünlerin kentsel mekânlar/boşluklar, işlevsel gereklilikler bağlamında değerlendirilmiş, öğrencilerin kentsel doluluklar kadar boşluklara karşı da farkındalık kazandırılması sağlanmıştır.

Anahtar Kelimeler: Tasarım Yaklaşımı, Parazit Mimari, Deneysel Atölye, Mimarlık Eğitimi.

1. INTRODUCTION

Abstract, conceptual components and concrete elements such as environmental data, human-environment relationship and user needs gain holistic importance in spatial construct creation. Therefore, the socio-cultural context should be considered in the formal production of architectural design education and the places shaping human activities (urban spaces/gaps) should be examined within the context of meaning perception. Architectural design studio is central to the formation and the shaping of spatial construct in the

architectural education. With this understanding, it is aimed in design studio to have students develop a perspective that focuses on the relationship between city, architecture.

Students' having knowledge about design approaches throughout the education process, providing them with the ability to produce quick alternatives to the problems they are presented in the solution phase constitute an important area in the application field of architectural education. At this point, workshops where architecture students will seek answers to a specific design problem within a limited time have an important place in the education process.

The issue of parasitic architecture discussed in the architectural agenda describes a flexible, adaptable, temporary but sustainable spatial approach that penetrates into existing urban spaces, structures or infrastructure elements and establishes a unilateral utilitarian relationship by making use of them (Yorgancıoğlu D. and Güray, 2018, p:144-155).

The studio work fictionalized within the context of the course Basic Design 2 in Çukurova University Department of Architecture 2017-2018 academic year and based on the "parasitic architecture" approach, encourages architecture students to investigate problem identification, design research and development processes and to explore experimental architecture applications. In the workshop, design proposals within the framework of the concept of parasitic architecture, aimed at harboring temporary actions that will continue to exist for a certain period of time were developed by Basic Design II student workshop groups to be placed in the gaps in Çukurova University campus.

This experimental design workshop aimed to provide an environment for discussion and information production on how new actions / uses can transform the campus spaces where mostly used by students. In this process, it was aimed to have students investigate the critical design methods and in this context, their approach to parasitic architecture and in comprehending and revealing the states-possibilities-potentials of the spaces/gaps within the existing campus shaped the study. On the other hand, the design process itself has a pedagogical importance because it provides a learning environment.

2. PARASITIC ARCHITECTURE AS A DESIGN METHOD

The method is a fixed goal that is well-thought to achieve a specific goal. The methodology covers all methods and techniques (Voordt and Wegen, 2005, p: 251). The word "method", deriving from the Greek word meta+hodos in which means a path to be followed (Bayazit, 2004, p:308). Design methods were first seen with product designs in literature in the 1950s and 60s and have progressed by integrating the architectural developments of the era as an architectural design method until today (Jones, 1992, p:407). One of these methods in architecture is Parasitic Architecture.

The concept of parasitism can be defined as an organism that feeds from a location where it is depending on the presence of that location. The parasite takes advantage of this connection, while coming into being by being articulated into the host organism. Therefore, an ecological relationship between two organisms is mentioned. In this relationship, while the host organism is in the position of being the carrier of the organism defined as parasite and parasite benefits from the host (Myburg, 2014, p: 233), (Kachri, 2009, p:70).

The term of parasitism rooted in the field of biology is a subject that has been lately and widely used in architecture literature as a design strategy with the concepts of "parasitic architecture", "architectural parasite", "parasitic structure", "parasitic space" or "urban parasite". "Architectural parasites" are defined as structures, which penetrate into or even attack the existing structures. Examples of "parasitic architecture" come into being through adapting by the addition to the existing space or structure. The interface of this articulation can sometimes be a blank walling or roof, sometimes the space between the two buildings, and sometimes urban infrastructure elements such as street lamps, advertising boards, bridge pillars and underpasses. Considering the relationship, they build with the host structure;

- ✓ they are adaptable,
- ✓ transient,
- ✓ and exploitative (Yorgancıoğlu D. and Güray, 2018, p:144-155).

Therefore, as a way of questioning the reuse potentials of the space within the architectural urban fabric, parasites are mostly found in idle spaces, in the "interstitial spaces" of the city, in urban spaces or in structures that have lost their functions (Yıldırım, 2013, p: 19).

Parasitic architectural examples are commonly encountered in literature as the function of living-housing. The reason for this may be the dwelling problem, experienced since the World War II, has still been going on and there is an increase in the number of homeless people worldwide. Due to the density of cities, increasing homelessness and migration problems, the function of parasitism aims to respond to social needs beyond an artistic approach (Charytonowicz, 2017, p: 3-12). As an example, Hur (2006) in his study interpreted parasitic architecture as a futuristic approach. He presented parasitic architecture as a solution to the problem of the cities' exceeding their capacity and the urbanization problems such as CO2 level, population, social level, unplanned urbanization, etc. (Hur, 2006, p:118).




Parasitic architecture has emerged as a design that uses the nature model as a productive force for its forms, and as a contrasting character in the large, permanent and static buildings of the 20th century (Şensoy and Üstün, 2018, p: 170-195)

This new structural situation can draw attention by rendering the new spatial possibilities visible to the citizens, who had not previously been aware of them and small touches may produce large spatial-experiential effects (Adhienides, 2005, p:19). Within this context, it may be asserted that parasitic architecture emerges as an alternative way of establishing relationship in terms of reconstructing identity in the built environment and investigating the ways of establishing spatial communication. Therefore, parasitic architectural products become new parts of the environmental memory.

3. IMPLEMENTATION OF THE PARASITIC ARCHITECTURE

In the light of theoretical information provided about parasitic architecture, implementation method examples in the world are given in the table below.

Table 1. Examples Around The World

1. Additional Parasitic Bedroom, 1971, Switzerland (Url 1)	
	<p>In 1971, the French architect installed a parasite bedroom on the façade of a regular modernist residential apartment block in Geneva, Switzerland. Chanéac's 'parasitic sucking cells' are mobile, evolutionary and a complete contrast to the host building's architectural style in every sense possible.</p>
2. Parasitic Working unit under bridge, 2017, Spain (Url 2)	
	<p>Designer Fernando Abellanas set up a secret studio under a graffiti-covered bridge in Valencia, Spain, and used concrete infrastructure to create a roof and wall for privacy. "In this case, we are not talking about an idyllic hut that you will find in the middle of the forest, but what you find in small cities that you can hide from the hectic pace of the city," said Abellanas.</p>
3. Parasitic Office Building, 2011, Russia (Url 3)	
	<p>Arseniy Borisenko and Peter Zaytsev's office design on 5th Kozhukhovskaya street is the first living example of Parasitic architecture. The skeleton of the office is made up of an asymmetrical metal frame with an asymmetrical front surface and a flexible, light but durable polycarbonate frame that looks like a canvas stretched to the frame.</p>

4. Concept project in England for the homeless (Url 4)



James Furzer has created a parasite design that provides temporary shelters for homeless people in London, where they can take shelter in cold, rain and mud. The "sleeping houses" made of plywood, are hung from the exterior of the buildings at a height above the head level, with steel skeletons, and descending and ascending stairs.

5. Parasitic House, Concept Project (Url 5)

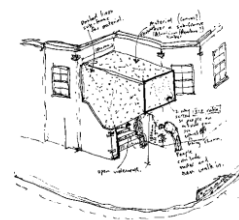


The parasite prefab by lara calder architects image courtesy lara calder architects, australian firm lara calder architects have sent us in images of their latest project 'the prefab parasite'. The prefab parasite is to populate the unused space found in urban landscapes. to achieve sustainable densification the dwelling attaches itself to a blank building fabric found in the city. It grows on empty facades, rock faces and bridges. it finds value by turning dead public space into lively private space.

6. Stairway Cinema, 2012, New Zealand (Url 6)



Minimal, red-colored parasitic cinemas have been designed on Auckland Street, a busy street where people can spend their waiting times and socialize.



7. Parasitic Bedrooms for the Homeless (Url 7)



Despite the biting cold, many homeless are hesitant to head to shelters, fearing the rampant violence and disease in these homes more than the freezing temperatures outside. Resorting to creative means of survival is therefore a necessity, and perhaps one of the more creative solutions is being offered by artist Michael Rakowitz.

Situations in which the selected projects become parasites to the existing structure;

- ✓ An additional room to an existing apartment block (1)
- ✓ Blank walling of the building (4,5)
- ✓ Between two buildings (3)
- ✓ Under a bridge (2)
- ✓ Air Shaft (7)
- ✓ and the staircase of the building (6), which is not used any more served to the construction of an experimental workshop in the light of unique examples, which find their place within the context of the city.

4. IMPLEMENTATION OF THE ÇUKUROVA UNIVERSITY ARCHITECTURAL DESIGN STUDIO DESIGN APPROACH “PARASITIC ARCHITECTURE”

"Parasitic Architecture Workshop" was done within the context of the Basic Design Studio, in which first graders of the Architecture Undergraduate Program participated in, in the spring term. In this 12-weeks long design process, students were expected to explore the spatial relationships, possibilities and potentials of the Çukurova University campus and to investigate different design approaches.

The 12 weeks long workshop process was applied in the form of;

- ✓ The 12 weeks long workshop process was applied in the form of;
- ✓ Providing informative presentations of the workshop executives on the subject,
- ✓ Establishing work groups,
- ✓ The groups' doing literature research on the concept of "parasitic architecture",
- ✓ Conducting and analyzing sample researches on the subject,
- ✓ Determining a structure or infrastructure offer, in which site analysis, campus tour and the parasitic structure they experience will be articulated and the choosing of a function,
- ✓ Project development process accompanied by the workshop executives in the studio regarding what kind of a use area the parasite structure will present, what actions it will host and sketch and model works,
- ✓ The formation and exhibition of the outcome, in which the relationship established in the 3rd dimension with the existing structure was scrutinized.

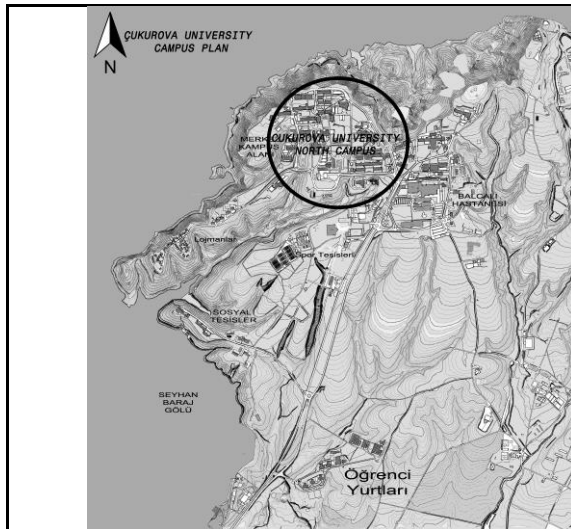
4.1. Study Area

The study area of the Parasitic Architecture Workshop was determined as the Çukurova University Central Balcalı Campus. The campus, located on the east bank of the Seyhan Dam Lake, on 20 thousand decares of land that is also a wildlife sanctuary (Saban and Çolak, 2012).

Çukurova University Campus, which is designated as the study area, can be divided into two as the lower campus and the upper campus. The north side, which was formed in the first years of the establishment of the campus and covers education areas situated in the user memory as the "Main Campus". In this sense, the workshop area covers the pedestrianized area of the north of the campus, including the Department of Architecture.

Table 2. Study Area: Çukurova University

	<p style="text-align: center;">Çukurova University General View (URL 8)</p>
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Çukurova University Master Plan (Created by the authors)

4.1. Discussion Over Student Studies

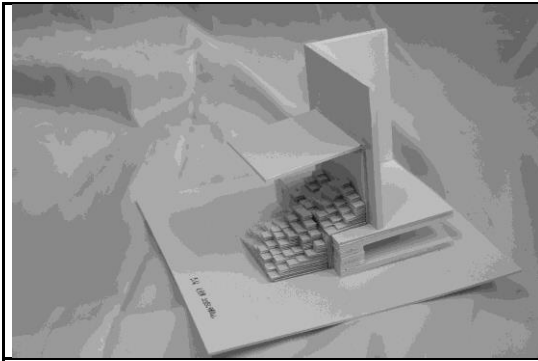
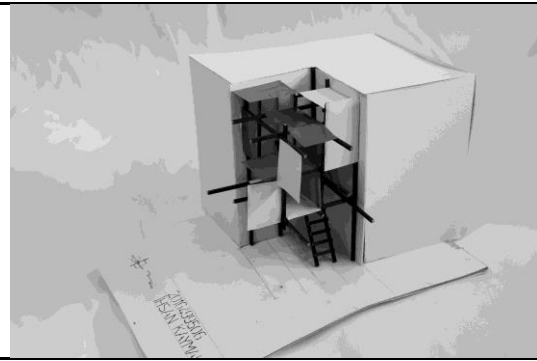
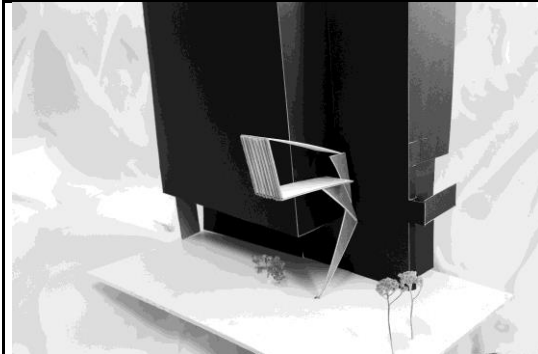
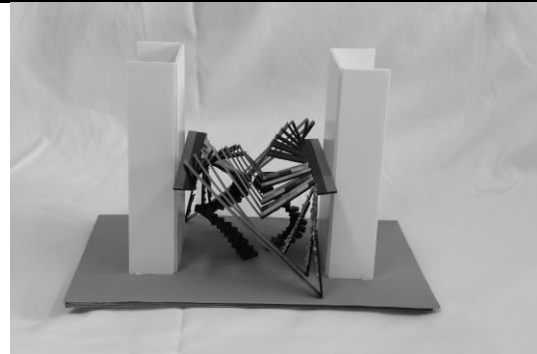
Six projects were selected for the publication from the final products presented in the 12-week long workshop process. The selected projects were evaluated by creating a table which summarizes projects' locations in the campus, their function and their main idea.



Image 1. Indicating the location of the studies on the map (Created by the authors)

Table 3. Evaluation Of Selected Student Studies

<p>1. Project Student Name: Nisa Karakılıç Definition: On the blank facade of the Faculty of Economics and Administrative Sciences Deanship Function: Advisory unit</p>	<p>2. Project Student: Beste Süle Definition: Campus north slope Function: The sitting unit on the hillside</p>

**3. Project****Student:** Bilal Kaya**Definition:** Deanship of the Faculty of Engineering**Function:** Amphitheater**4. Project****Student:** İhsan Kaymak**Definition:** The studio of the faculty of architecture**Function:** Exhibition space**5. Project****Student:** Sultan Ateş**Definition:** The studio of the faculty of architecture**Function:** Student studying unit**6. Project****Student:** Aslıhan Öksüz**Definition:** Faculty of Economics and Administrative Sciences**Function:** The sitting unit

1st project; on the blank facade of the Faculty of Economics and Administrative Sciences Deanship, a security-advisory unit with a separate entrance was designed, which entirely existed with the carrier system of the existing building.

2nd project; This is the design of the sitting on the hillside unit, which has a view of the campus overlooking the lake and where the students enjoy their free time with pleasure and which also comprises an important focal point of the campus, which is "Son Durak Kafe". Three modular units were designed for reading, resting and group work in the project.

In the 3rd project, a covered amphitheater consisting of stepped modular seating steps was designed on the blank walling of the Deanship of the Faculty of Engineering.

In the 4th project, an exhibition space inspired by "de stijl" (the style) movement was designed in the L formed blank wall opening of the faculty of architecture, workshop building and in the 5th project, a parasitic studying unit was designed in the same area.

Lastly in the 6th project, a design aimed to use the space between the two buildings in the Faculty of Economics and Administrative Sciences was developed. The different steps over the designed bridge were considered as student study areas and the shady areas formed by the bridge were considered as sitting areas.

5. CONCLUSION

The ability of students to analyze the spaces, their examination of the relationship, which the architectural product establishes in its environment and their encouragement regarding the determination of various spatial potentials, which are some of the aims of the study, are strategies directing the study. Within this context, developed projects of students based on experiencing, determined the potential of the parasite structure.

In the study, the findings obtained following the Parasitic Architecture Workshop Studies may be summarized under the following headings;

- ✓ The dialog of the architectural product with its environment was analyzed,
- ✓ The design approaches in which the space was parasitically re-appropriated and re-interpreted were treated,
- ✓ There was an effort to transfer the basic design principles to the processes of space design in architectural scale and formation of architectural program.
- ✓ The students were encouraged to discover the environment they lived in with its various spatial characteristics and to investigate its potentials,
- ✓ There was an effort to form an environmental awareness regarding the necessity to mold the endeavor to comprehend the space and to form a new space with contextual thought and how the relationship established with the space may be defined on the basis of the experience phenomenon,
- ✓ There was an effort to improve knowledge and skills regarding the structure scale by trying to analyze how host structures can be utilized in terms of structure, location, view and transportation facilities and the penetration and articulation details of the parasite structure.
- ✓ Concepts such as temporariness, sustainability, flexibility, convertibility, mobility and portability were brought up for discussion based on parasitic architecture.

Thanks to the investigation of environmental potentials and the transition of this knowledge into architectural space design, students' awareness on the act of architectural design that is not only a process of forming shapes but also forming knowledge was increased.

Consequently, it was seen that parasitic architectural design workshop supported the development of students' design skills and contributed to the learning process; in the architectural education process, students improved their ways of establishing alternative relationships between human-space-environment and explored new design tools.

REFERENCES

- Adhienides, D. (2005). "Re-inhabiting the Void", Unprinted Master Thesis, University of Pretoria, Faculty of Engineering, Built Environment and Information Technology, Pretoria.
- Bayazit, N. (2004). Endüstriyel Tasarımcılar İçin Tasarlama Kuram ve Metotları, Birsen Yayıncılık, İstanbul.
- Charytonowicz, J. (2017). "Parasitic Architecture: Theory and Practice of the Postmodern Era", Proceedings of the AHFE 2017 International Conference on Human Factors, Sustainable Urban Planning and Infrastructure, p. 3-12, USA.
- Hur, B. (2006). "Prefab and Parasitic Architecture: Architectural Solution of the Future City Crisis (With Case-Study Design Projects)", Master Thesis, Iowa State University, Ames, Iowa.
- Jones, J. C. (1992). Design Methods, Wiley-Interscience. ISBN: 978-0-471-28496-3
- Kachri, G. (2009). "Parasite Ecologies: Extending Space Through Diffusion- Limited Aggregation Models", Unprinted Master Thesis, University College London, Bartlett School of Graduate Studies, London.
- Myburg, J. (2014). Mesoparasite: a symbiotic affair. Design strategies that explore the parasitic habitation of Auckland Harbour Bridge as a destination in its own right. An unpublished research project submitted in partial fulfilment of the requirements for the degree of Masters of Architecture Professional Unitec Institute of Technology.
- Saban D.F. & Çolak A. (2012). "Çukurova Üniversitesi Master Plan Komisyonu Mimari Rapor".
- Şensoy, G., & Üstün, B. (2018). "Traces of the Past Utopias in Contemporary Architecture: Parasitic Architecture". ICONARP International Journal of Architecture and Planning ISSN: 2147-9380, 6(1), 170–195. <https://doi.org/10.15320/ICONARP.2018.44>

- Url 1: <https://popupcity.net/the-pirate-bubble-parasite-architecture-from-the-seventies/> Access Date: 12.06.2019
- Url 2: http://prado-designs.com/en_GB/parasitic-architecture/ Access Date: 12.06.2019
- Url 3: <https://www.archdaily.com/138151/parasite-office-za-bor-architects> Access Date: 12.06.2019
- Url 4: https://www.archdaily.com/770386/these-detachable-pods-aim-to-provide-shelter-for-britains-homeless?ad_medium=widget&ad_name=recommendation Access Date: 12.06.2019
- Url 5: <https://www.designboom.com/architecture/lara-calder-architects-parasite-prefab/> Access Date: 12.06.2019
- Url 6: <https://www.archdaily.com/246874/stairway-cinema-installation-oh-no-sumo> Access Date: 12.06.2019
- Url 7: <https://architizer.com/blog/inspiration/stories/michael-rakowitz-parasite/> Access Date: 12.06.2019
- Url 8: <https://www.cu.edu.tr/cu/institutional/university/genel-bilgi> Access Date: 12.06.2019
- Voordt, T. JM. & Wegen, H. BR. (2005). *Architecture In Use: An Introduction to the Programming, Design and Evaluation of Buildings*, Architectural Press An imprint of Elsevier, England.
- Yıldırım S. (2013). "Urban Parasites: Re-Appropriation Of Interstitial Spaces In Architecture Through The Act Of Graffiti", A Thesis Submitted To The Graduate School Of Natural And Applied Sciences Of Middle East Technical University, Ankara.
- Yorgancıoğlu D. & Güray T. S. (2018). " Mimari Tasarım Eğitiminde Alternatif Yaklaşımlar: Bir Mekân Tasarımı Stratejisi Olarak Parazit Mimari", *Megaron*, 13(1):144-155.

