



New possibilities of living together in post-humanist society: Interior and furniture design for pets

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Abstract

With their various physical differences, pets have to live with their owners in interiors, which is designed according to human scale. On the other hand, human-specific anthropometric measurements, which are the basic parameters in space design, are not sufficient to provide ergonomics in indoor spaces, which are also living spaces for pets. The hypothesis of this study, in which current examples of interior and furniture designs suitable for the physical needs of pets, whose numbers are increasing day by day, are discussed with an inclusive approach in interior architecture; It has been determined as 'when the interiors where pets live are redesigned according to the characteristics of the animals, ergonomics is provided for 'all living things' in the common living areas. The subject of common living space in the literature; Although it has been investigated in interdisciplinary fields such as cognitive psychology, zoology, and architecture on topics such as biodiversity, sustainability, animal welfare, and animal behavior, the subject of 'space organization of shared living spaces shared with domestic animals' as a new approach in the field of interior architecture has not been sufficiently discussed. For this reason, the research is a pioneering and descriptive study in terms of drawing attention to current practices in terms of conceptual infrastructure, architectural design, space organization, application examples and experimental models, making a systematic review of existing studies on the subject, and identifying new trends in the field of interior architecture. The aim of the research is to expand the interior design, which is a multidimensional subject, to include spaces designed for living with pets, in particular the arrangement of common living spaces. Since subjects such as interior design, interior architecture, and design have a wide field of research, the scope of the study is limited to the specific space and furniture designs designed for pets in terms of ease of research. In the descriptive study, the survey model, one of the quantitative research methods, was preferred as a research method to review the existing status of the researches in the field of design within the existing sample applications. As a result of the study, it has been understood that the 'interior and furniture design for pets' approach is a design approach that is open to development, is an inclusive application in the interior and has a high potential to be preferred.

Keywords: ergonomics, common living areas, interior design, post-humanist society, inclusive architecture

1. Introduction

The first article of the United Nations (UN) Universal Declaration of Human Rights (UDHR-1948) states that "All human beings are born free and equal in dignity and rights". According to this expression, 'equality' is a fundamental right that all human beings should have from birth. The design approaches produced within the principle of equality, which is accepted as a fundamental right for people, have been developed for the regulation of democratic usage conditions of common spaces. In this respect, the inclusiveness of the arrangements made in order to provide the physical comfort conditions in the artificial environment in which the users live in spite of various differences in inclusive common living spaces is still being discussed.

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With the invention of the steam engine by James Watt in 1789, the influence of man on nature was strengthened, and after this date, which is considered the beginning of the industrial revolution, the human-centered anthropocene approach has become increasingly important for the regulation of the artificial environment. Thanks to the positivist understanding of the 18th century and the modernism that developed in parallel with the optimism of the enlightenment period, ergonomic principles were determined to provide machine-human harmony with the priority of human measurements. This situation has led to the development of the literature on the nature-human-machine relationship on the axis of human characteristics and the creation of new regulations. These arrangements, which are based on anthropometric measurements within the human-centered design approach of modernism, are in the literature; design for all, inclusive design, lifespan design, and human-centred design. In this case, it can be said that the users covered are only 'humans' and that other living things with whom we share common habitats are excluded from the nature-human relationship.

Approaches to living together with the natural environment and other living things in architectural theory; It can be argued that before the modernist period, when the anthropocene approach began to become widespread, it emerged with the desire of humans to control nature. In these approaches, which center the nature-human unity in the center with a utilitarian perspective in the architectural literature, the focus is mostly on the subject of 'modern man living together with nature'. In the 'anthropomorphic space of common life' defined here, only human was seen as superior, and all other living things were thought to be at the service of humans. In this approach, which suggests a commensal life rather than a symbiotic life; while it is said that humans should benefit from living things living with humans, artificial environmental features and physical comfort conditions suitable for these creatures are ignored. In this context, while anthropomorphic space proposes an integrated framework in terms of socio-cultural-spatial, it does not have normative concerns for other living things other than humans.

In the spaces shaped according to the anthropomorphic understanding, other living things other than humans have had to live in artificial environments designed as human-centered, although they share the common living space. The 'adaptation' of existing designs according to the characteristics of other living things, in the focus of ergonomic principles, does not sufficiently provide the physical comfort conditions of a life that can be described as symbiosis. This discrimination problem, which arises between humans and other living things in the design of common living spaces, is as much a spatial problem as the 21st century anthropocene design approach. According to its terms, it needs to be re-discussed for the post-human period in the future.

The post-humanist understanding, which started to become widespread in the 21st century after the anthropocene design approach, made us think that other living things should have equal physical comfort conditions in their living environments. The post-humanist understanding, which is defined as post-human, is getting stronger in parallel with the propositions of industrial and functionalist discourse that focus on the non-human. The post-human period, which started to be discussed with the increase in the widespread use of computers in daily life with the 3rd Industrial Revolution in the 20th century, points beyond the understanding of trans-humanism, which is seen as the extreme point of human-machine interaction.

Social actors, who became atomized in terms of social relations in the post-humanist period, remembered the other living things they lived with and tried to establish a new living environment with them. The reflections of this effort, which can be evaluated within the scope of critical humanism, unlike the characteristics of anthropomorphic space, have been embodied by the increase in the pet population in common life. As of 2022, it is known that there are 110 million cats, 89.8 million dogs, 51.9 million birds, 29.8 million small mammals, 15.4 million aquarium creatures and 9 million reptiles registered as pets in EU countries. Considering that these creatures share the same living environment with humans, it can be said that interior and furniture design has become a necessity for other living things besides humans. The hypothesis of this study, in which current examples of interior and furniture designs suitable for the physical needs of pets,

whose numbers are increasing day by day, are discussed with an inclusive approach in interior architecture; It has been determined as 'when the interiors where pets live are redesigned according to the characteristics of the animals, ergonomics is provided for 'all living things' in the common living areas.

In the literature, inclusive architecture practices have generally been examined in terms of human users, and the concepts of nature-human-environment have not been sufficiently investigated in terms of other living things we live with. In this respect, the study; It is a pioneering and descriptive study in terms of drawing attention to current practices in terms of conceptual infrastructure, architectural design, space organization, application examples and experimental models, making a systematic review of existing studies on the subject, and determining new trends in the field of interior architecture.

The aim of the research is to expand the interior design, which is a multidimensional subject, to include spaces designed for living with pets, in particular the arrangement of common living spaces. However, as a result of the evaluation of existing applications, the design orientations of the space designers will be tried to be determined. For this reason, since subjects such as interior design, interior architecture, and design have a wide research area, the scope of the study is limited to the specific space and furniture designs designed for pets in terms of ease of research. In this context, unqualified pet items that cannot be considered as design elements placed in spaces designed for people and design attachments placed in the existing space without being designed are excluded from the scope. The socio-cultural and economic differences of the countries where the images were taken are excluded from the scope.

2. Literature Survey

In determining the conceptual infrastructure, in the thesis database of the Higher Education Institution (YÖK), in the Dergipark academic database, in the architecture web database, in the Google academic Turkey database and in the library catalogs of the universities with architecture/planning and design departments; the keywords 'Ergonomics, Common Living Spaces, Interior Design, Post-Humanist Society, Inclusive Architecture' were searched in Turkish and English. As a result of the research, until October 2022, 4 thesis, 11 books, 16 article, 2 papers were determined, and 6 of these studies were selected for research. Inclusion and exclusion criteria for the selection of studies were established based on the PICOS method. In the second stage, the researches constituting the sample set; year, subject, method, area of expertise, bibliography, universities and institutes were categorized and subjected to content analysis. As a result of the analysis, the subject of common living space in the literature; Although it has been investigated in interdisciplinary fields such as cognitive psychology, zoology, and architecture on topics such as biodiversity, sustainability, animal welfare, and animal behavior, it has been understood that the subject of 'space organization of shared living spaces shared with pets' as a new approach in the field of interior architecture has not been sufficiently discussed. It has been determined that most of the definitions are made within the anthropocene approach.

Along with the anthropocene, which emphasizes the extent of the impact of human activities on other beings in the universe, posthumanism has a tendency to move man away from the focus of this mindset. Posthumanist thinker Rosi Braidotti defines humanism as the dominant model for humanity (Braidotti, 2013). Beginning with the Renaissance and reaching its peak with modernism, the potential of human beings to take control of beings other than himself has increased with the impact of developments in basic fields such as biology, psychology, medicine and the advancement of technology. While the approach of anthropocene thought was rising, the mentality of Humanism centered on human existence was also opened to discussion. According to the anthropocene approach, there are different opinions in the literature on the date of the beginning of the change of ecosystems by humans. According to this understanding, Crutzen & Stoermer, Zalasiewicz showed the 19th century Industrial Revolution as the beginning, Nakicenovic & Stewart dated the beginning to the 18th century, and Meybeck started this period in the 1950s.

The concept of anthropocene, which is generally defined by naturalists, entered the literature after becoming a common term used by many disciplines. The word anthropocene is a combination of two Greek words with etymological origins. These; 'anthropos' meaning human and 'kainos' meaning new. The suffix -cene gives the meaning of "belonging to the last period" to the word (Peters, 2012). According to Rafferty (2020), who interprets the word etymologically as 'the last human age', the word anthropocene was coined by Biologist F. Stoermer in the 1980s and was used in the literature by Nobel Prize Winner Paul J. Crutzen in 1995 in Chemistry. Crutzen and Stoermer, who studied ozone, used the concept of anthropocene to emphasize the destructive effect of man on nature. As the pressure and dominance of man on nature increased, the area of destruction also expanded. Concepts such as ecology and sustainability, which were developed as a solution to this, still continue to be discussed. In 2008, according to the theory of British geologist Jan Zalasiewicz, it was stated that the Earth passed from the holocene to the anthropocene era, as the negative effects of humans on the environment on a global scale became irreversible. According to Crutzen and Steffen (2003), who started this transition with the Industrial Revolution, the 18th century. At the end of the century, the driving force of change was the anthropocene approach. In this respect, since the second half of the 18th century, the idea of domination over nature, which was deemed necessary for change, has left its place to worry because we see the irreversible consequences of the destroyed nature.

The human being, who degrades, transforms and destroys the natural environment, has also removed the beings within the ecosystem from their natural habitats. This thought led to the questioning of the symbiotic life style of humans and other living things, thus the concept of ecology was born. The word ecology, which was used for the first time by Henry Thoreu in 1858, consists of two Greek words as etymological origin. These; 'oikos' meaning home-space and 'logos' meaning science. In this case, it can be said that ecology, which was defined as a science in the 19th century, is the science of the natural habitats of living things. With Elton's book 'Animal Ecology' published in 1927, ecology, which focused on the habitats of animals at first, drew attention to natural environments for plants and humans with the environmental crises in the 1960s. In the 21st century, ecology is separated from its atomized structure and covers the entire ecosystem from subatomic particles to universe dimensions with a more holistic "ecological systems theory" approach.

Design of a living environment in which all living and non-living beings that make up the whole live together; can be explained with the concepts of symbiosis, mutual living or collective life. The interrelatedness of these entities can be explained by the concept of 'synergy', a Greek word meaning 'working together'. Accordingly, synergy is defined as "the behavior of integrated systems that cannot be predicted from the observed behavior of the different parts that make up a system or from the interconnections of the system" (Fuller, 1975: 3). These artificial living environments, which can be designed with a biological solidarity-based approach necessary for the continuity of life; they are formed from genetic theories with organismic and evolutionist approaches or according to the eco-system approach. Among these approaches, according to the 'ecosystem' approach, which was defined for the first time in the article of botanist George Tansley in the journal Ecology in 1935, the functioning of a community depends on the place of inanimate objects in the living environment as well as the relationship between living things. In this context, while living things other than humans, whose natural environment has been destroyed, continue to live in artificial habitats designed by humans, the ecosystem to be created between humans, animals and things should have a synergetic structure as well as symbiotic.

The design discipline is as much a result of humanism as any other discipline. However, limiting design to its origins in humanistic thought marks an unsustainable way forward, not only ethically but existentially. Posthumanism allows for a rethinking of design in ways that displace the human at the center of thought and action with the materially, ethically and existentially interconnected humans and nonhumans (Wakkary, 2021). In order for this interaction between humans, animals and things to function smoothly as in natural life, the objects in the ecosystem to be created in the

interior are not only for humans; it should be designed to meet the needs of living things other than humans. The concepts of this new ecological architecture approach, which are defined as animal-first architecture, pet-friendly architecture, nature-friendly architecture or barkitecture in the literature, were explained in William Thomas's book *The Dog Rules* in 2000. Although there are differences between these concepts, the problem that the approach is based on is the rearrangement of the artificial environments in which other living things, which have to live in environments designed for humans, live according to their characteristics for a symbiotic life indoors.

3. Material and Method

A two-stage methodology was applied in the study. In the first stage, the existing researches were examined and the definitions of the concepts related to the subject were clarified with reference to the sources in the existing literature. In the second stage, the images of current public space and furniture applications were evaluated by content analysis method in accordance with the theoretical infrastructure.

Google, Bing and Yahoo Search search engines were used to determine the existing space and furniture applications. The keywords 'Ergonomics, Common Living Spaces, Interior Design, Post-Humanist Society, Inclusive Architecture', which are used to determine the conceptual infrastructure, were searched in Turkish and English in the search of images. However, the main research subject in the study is; the words animal-first architecture, pet-friendly architecture, nature-friendly architecture and barkitecture were also searched in Turkish and English languages in various databases.

Various interior and furniture images obtained from different digital databases were used as research material. In the study, as a research method, scanning model, one of the quantitative research methods, was preferred to review the current situation. The general screening model, which was preferred to create the research population of the descriptive study, was deemed appropriate for the study in terms of making a generalizable judgment as a result of the systematic review. In this respect, it can be said that a systematic review is a comprehensive synthesis of a large number of samples that have chosen similar methods to identify the evidence produced by experts and reconstructed. The importance of systematic review in the disciplines of architecture and design is increasing, as it is convenient to produce strong arguments from evidence-based practices in discussions conducted over samples.

In the study, the stages of accessing the images accepted as documents, checking the originality of the images and analyzing the data were followed. At the stage of accessing the documents, it was tried to reach the data sources within the inductive method. The media sets of the images in the digital databases were obtained by typing the keywords in Turkish and English into the image search section of internet search engines.

4. Experimental Results

Pets are adopted as members of their families in the eyes of their owners, so the place where they live together is considered their "home". When the living spaces, which are described as homes, are designed by considering the ergonomic characteristics of animals living in the same place with humans (symbiotic life), environmental harmony will be improved and animal welfare will also be ensured. For this reason, pet owners felt the need to reorganize their spaces according to their symbiosis characteristics so that all individuals feel safe and happy as a family in their living space. Having an ergonomic, comfortable and well-designed common living area for all members of the family will lay the groundwork for providing the conditions necessary to lead a life together. If the symbiosis space organization is planned in accordance with living together with our pets, pets and their owners will have a comfortable, hygienic and orderly living space, and thus, it will be ensured that the joint activities are enjoyed together. Apart from the spaces designed within the framework of ergonomic principles specific to human beings, spaces shaped according to animal

characteristics have caused the issue of rearrangement of common living spaces to be discussed in the field of design. These discussions necessitated looking at current design approaches from a different perspective. This situation not only changes the understanding of design, but also rethinks the sources and scales used as data in the stages of the design process. In our common living spaces, especially in our homes, the decisions to be taken at the beginning of the design process and the special details to be resolved in this direction will make these spaces more qualified and functional.

Pet spaces for symbiosis cannot be designed with jewelry and items added to the space, unlike spaces designed for human users. Based on this idea, pet items that are placed in spaces designed for people, purchased later and are add-ons will not be enough to make our common areas suitable for living together. It can be said that the place we live in is defined as a common living space for humans and animals, thanks to the practical details that were added to the interior design during the project design process according to the design approach developed within a symbiotic life, facilitating our lives with our pets, providing hygiene and producing solutions for self-care needs.



Figure 1 Entrance Hall, wet area (URL-1)



Figure 2 Laundry area, food stations (URL-1)

The space example in the image shows the details created during the project design process (Figure 1). The most important finding that these details were created during the project process is that the sanitary installation was placed in a section that is not considered a wet area for human users. A pet washing area (paw washing unit) located in the entrance hall will contribute to the cleaning of a dog that spends time outside when entering the house, thus ensuring that the house is more hygienic, and that the self-care needs of a pet dog are met in a practical way. In this example, the wet area planned with the furniture unit created for shoes and outerwear in the entrance hall contributes to the common living area as a surprising and functional addition. This area is also open to people. It can be mentioned that this wet area, which can be used for cleanliness and order, is a detail that provides comfort and hygiene for both humans and animals. This wet area detail, which is not seen in ordinary house entrance planning, contributes to the organization of space as a useful and functional detail for people when considered in detail.

In the other image, a residential laundry room has a dog food station integrated into the furniture unit, neatly placed under the sink (Figure 2). This detail provides a practical organization for pets and their owners, creating a neat and hygienic solution. The most important finding showing that this detail was not added later in the project process is that the fine building details show integrity, and the unit was designed as a fixed space element, not as a movable furniture. Storing pet food or items in the cupboards in the laundry room also provides a clean and tidy planning by creating a settled order.

Considering that pets enjoy spending time with their owners and want to be with them most of the time, a special niche integrated into the kitchen island, as seen in the first example, will be a safe and happy space for pets such as cats/dogs (Figure 3). In the other example, it is related to the fact that the area designed according to animal ergonomics is a piece of space rather than a mobile item (Figure 4).



Figure 3 Niche detail in the kitchen island (URL-1)



Figure 4 kitchen unit pet partition (URL-1)

In another example, a naturally occurring space under the stairs was designed to create a special area for pets (Figure 5). Similar to the other example, this space, which was designed according to animal ergonomics within the existing space, is an important proof that design should not be made 'only for humans' in the symbiosis approach.

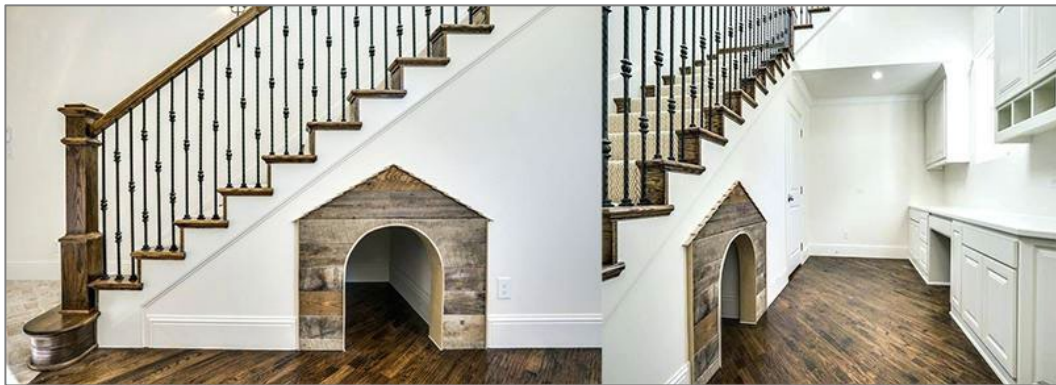


Figure 5 Under-stair pet area (URL-1)

In common living areas, “washing units” planned as a part of the design appear as a practical solution. These spaces, which can be considered as a separate wet space within the wet spaces, can also be considered as predecessors due to their functional and design approach that prioritizes the needs of animals. It is understood from the findings obtained as a result of the research that such space organizations, where the comfort of both types of users (human-animal) are considered, are becoming increasingly common (Figure 6-7). These washing stations, which are planned in wet areas such as the laundry room and guest bathroom, create a comfortable area for pets and their owners. It can be mentioned that these units constitute units that are open to the use of animals as well as humans, that support the act of maintaining cleanliness and order, and contribute to the organization of space. In this direction, it can be said that these areas are special solutions that serve the common use of humans and animals

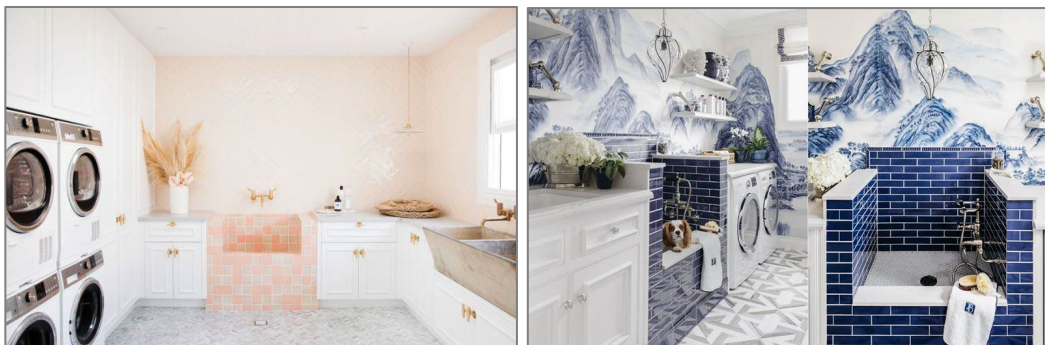


Figure 6-7 Pet wash stations (URL-2,1)

Cats by nature like to climb, jump, move from one object to another and create a track where they provide physical activity. Accordingly, it can be said that spaces designed according to the

unique characteristics of animals are a criterion to be considered in terms of common living spaces. Solutions to be created for the needs of our pets in interior design and furniture selection contribute to the emergence of space organizations planned with a pet-friendly orientation.



Figure 8 Interior design ceiling detail (URL-3)

In the visual, the ceiling detail, which is a part of the interior design, creates a walking path, in other words a track, as part of a space design for cats, while at the same time helping them to embrace their environment and establish a sense of belonging (Figure 8). The living area in the example, which is open to human-animal common use, has been privatized by adding a detail for animal use only. In line with the findings, it was understood that the analysis we performed for human users should also be performed for animal users.



Figure 9 An example of interior space multifunctional wall design (URL-4)

The wall unit in the image appears as a multifunctional module designed for human-animal common use (Figure 9). The unit in the common living area is an equipment for human-animal common use by incorporating functions such as library, display, play and climbing. The contrast of the rough-hewn natural tree trunk with the smooth white shelves makes an aesthetic contribution to the space design, while creating a natural scratching surface and walking track for the cat living in the house. For the space in the image, it can be said that it constitutes a qualified example of how feline family members can be integrated into a functional and livable space.

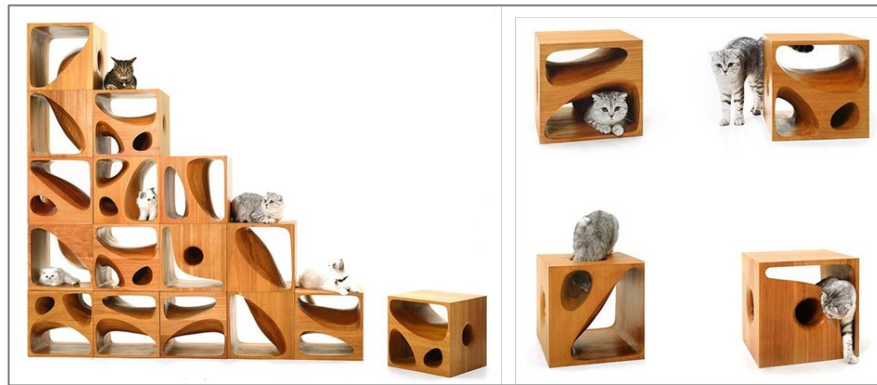


Figure 10 LYCS Architecture's design "CATable 2.0" ([URL-5](#))

In the image, there are wooden modules designed by LYCS Architecture, an international company with offices in Singapore, Hong Kong, Beijing, Shanghai, Guangzhou, Shenzhen, Hangzhou, and the winner of many awards in the field of design and architecture ([Figure 10](#)). "CATable 2.0", consisting of 4 cubic wooden modules in exactly the same dimensions, is a furniture design designed for both human and animal use. Each module has a specific path with special spaces for cats to roam freely. The "remaining" areas are a flexible design left to be used according to the cat lovers' own needs. It is possible to use these units directly as stools or coffee tables, or to plan them as bookshelves or display units. "CATable 1.0", on the other hand, is the table designed by the same company for animal-human joint use ([Figure 11](#)). Designed with cats who want to be close to their owners all the time, the table is a natural and aesthetic design that stands out with its soft lines. As it can be understood from these examples, there are companies that produce for the arrangement of common living spaces. This is when it qualifies as proof that the design of shared living spaces has increasing value.

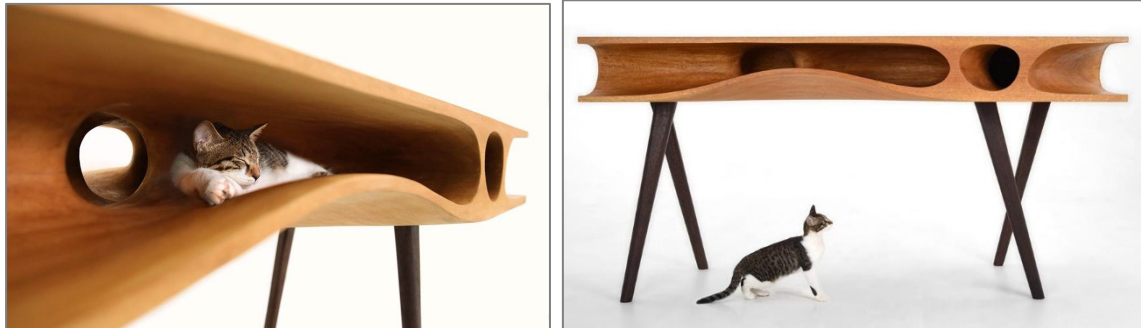


Figure 11 LYCS Architecture's design "CATable 1.0" ([URL-6](#))

Another example of furniture added to the living area, especially for the use of cats, is the modular system named "Gold Paw" designed by designer Stefan Hofmann ([Figure 12](#)). The module, which is designed in multi-pieces with a flexible design approach, has the opportunity to expand by combining it in line with the needs of cat owners. Multi-piece modules integrated into ceiling and wall surfaces in living areas are planned as a fun play and exercise area for cats.



Figure 12 "Gold Paw" designed by Stefan Hofmann (URL-7)

Located in Singapore, this apartment floor was designed by Mr Shopper Studio and planned to create an aesthetic and comfortable space for homeowners and their pet friends (Figure 13). While the wall shelves used in the space create a display area for the homeowner, it is also planned as a climbing and walking area for their pet cats, especially for the transition to the ceiling area designed at low elevation. The ceiling system, which is designed as floating, also allows the formation of a passageway for pets and connects the different walls of the space. In addition, the linear track, which is planned in addition to the ceiling system, acts as a bridge and makes the animal-human common living area enjoyable for pets.

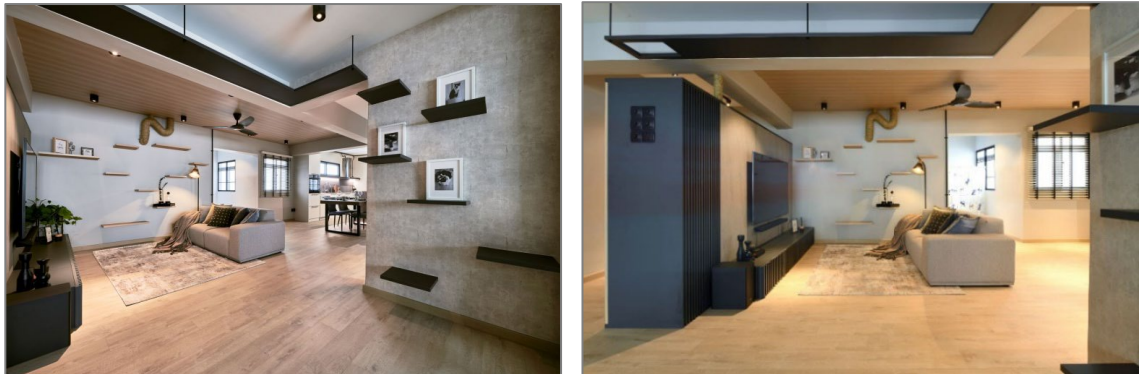


Figure 13 An Apartment designed by Mr Shopper Studio (URL-8)

Another project for the joint planning of living spaces is a small living space for shared use designed by "viaARCHITECTURE" (Figure 14). The housing space organization has been planned for the common use of animals and humans and is supported with details that can only be used by pets. While the passage niches created between the walls allow pets to make secret passages between the rooms, the interior furniture consists of staircase-like details that make it easier to reach these niches (Figure 15).

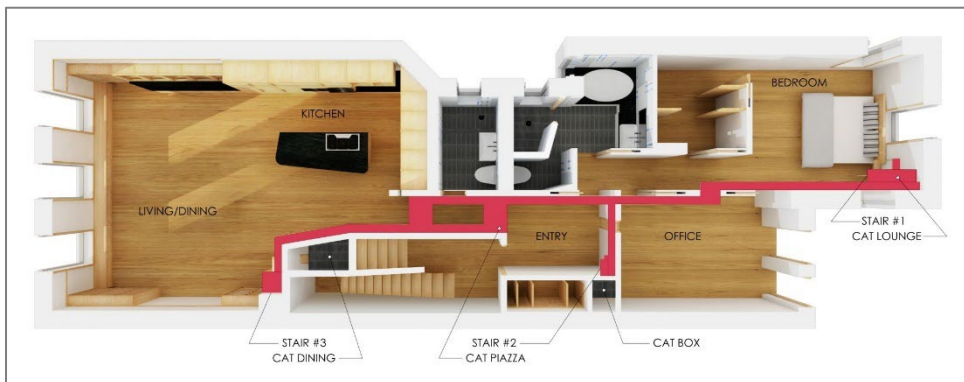


Figure 14 Small living space designed by "viaARCHITECTS" (URL-9)

In the space designed by “viaARCHITECTURE”, spatial organization, material integrity, and functional solutions that come to the fore in the design of small living spaces draw attention and can be defined as a quality space developed for human-animal common use.



Figure 15 Small living space furniture and wall details designed by “viaARCHITECTS” (URL-9)

When the subject of symbiosis with pets is researched, we mostly come across details about living with cats and dogs. Apart from these animals, many examples such as birds, fish, monkeys, rodents can be added. However, the largest sample of symbiosis with animals consists of cats and dogs, which we can express as the animals with the most developed possibilities of living together.

An extraordinary example that we can give outside the common living areas with cats and dogs is the fish tanks added to the space design (Figure 16). In these examples, which were created by organizing transition tanks between different aquariums, the swimming time of the fish was extended and their circulation in the space was ensured. Thus, the freedom area for fish has been expanded and a different detail has emerged in terms of space. Although these tanks, which support eating and drinking spaces aesthetically, seem to create an environment for living together, it can be said that the subject of symbiosis is limited since the interaction of fish and humans is limited or they do not interact as much as a cat / dog.



Figure 16 Common living area created with aquarium and tanks (URL-10)

It is possible to define interior designs planned with a human-animal symbiosis orientation as an innovative approach. In fact, it will be possible for two different creatures with anthropometric differences to live a common life in the same space by providing the comfort conditions, with special solutions included in the space organization. Self-care is the focus of designing a pet-

friendly, well-organized home. Having a clean, orderly and planned life organization for both people and animals will make life together more enjoyable and qualified, while offering special solutions for the care needs of animals. In common living spaces with animals, if the right materials are not chosen and the right organization is not set up, it may be possible for the space to wear out, become disorganized and move away from hygienic conditions. With the right ideas, it will be possible to plan space solutions in our home that meet the self-care needs of pets in a practical way and contribute to animal welfare. In this way, our living standards will increase together with our animal friends, with whom we have established unconditional love, and joint life will become quality.

Undoubtedly, the importance of social media is great in the spread of these innovative animal-friendly living organizations and the issue of living together with animals. The "animal sensitivity" and "animal friendly" approaches that come to the fore in social media have made a significant contribution to keeping the issue up to date. During the research process, the existence of a movement called "barkitecture" and also known as "animal friendly living space design" was discovered in the media and detailed research was conducted on the subject. When the literature on the subject title was searched, it was seen that the term "barkitecture" was not included in the literature. In fact, it can be said that the expression "barkitecture", which is a combination of the English words "bark" and "architecture", is a description for dogs only, not including other animals. Considering the density of interior and furniture design examples of symbiosis with animals, it has been determined that there is a need for an epistemological definition of academic interior design. One of the main aims of our research is to propose a definition of "SYMBIOSIS DESIGN", which expresses symbiotic life with pets, covers all animals, and meets the meaning of the word symbiotic. It is foreseen that this definition will be a top heading that covers space and furniture designs for the common life of pets and people.

5. Result and Discussion





The two-stage methodology applied in the study provided the clarification of the definitions of the concepts inherent in the subject in the first stage. It has been understood that there are differences between the terms derived about the subject. In this respect, it has been understood that the relationship between ergonomics and common living space design are immanent concepts. It can be said that human-centered inclusive architecture concepts come to the fore as human ergonomic features are prioritized in the discipline we are discussing.

In the second stage, the visuals of the existing interior and furniture applications were evaluated by content analysis method in accordance with the theoretical infrastructure. The findings obtained as a result of the content analysis made, it was understood with the extreme examples observed from the findings obtained that the human-animal relationship could not be kept under control in the common living spaces in the post-humanist period. Although the discipline of architecture suggests inclusiveness by stating that all living things have a place in space design, there are very few examples in the field of application that include all living things. This shows that it is necessary to review the human-centered understanding of design disciplines. However, it can be said that architecture that includes people and all other living things is not an optimistic approach defined only through opposites, but remains in the background in terms of importance in the 21st century. The reason for this situation can be shown as the continuation of the effects of the modernism approach, which emerged as a result of the prioritization of human characteristics in the positivist period. In line with the findings, it has been determined that although the architectural practices developed to live together with all living things in the post-humanist society are limited, they have the potential to become widespread.

The table below was created in line with the findings obtained (Table 1). Accordingly, it can be said that the examples can be grouped under two main headings in terms of ease of use and ergonomic compatibility. It has been understood that the furniture samples that can be used by animals are superior in number by prioritizing human needs. However, it should not be forgotten that these examples may have been created with marketing concerns in line with the findings

obtained. The reason for this thought is that the designed furniture ignores the ergonomic features of animals. However, in the understanding of symbiosis, harmony should be balanced in terms of animal and human use. It can be said that commercial concerns are at the forefront in designs made by accepting the superiority of a living thing. However, it has been concluded that the furniture used only for animals is insufficient in terms of function. Although the reasons for the purchase of furniture produced only for animal needs by human users for the space are not understood, it can be predicted that such furniture will not have a long-lasting use.

Table 1 Human-animal use, space-item relationship (created by authors)

| | In terms of use and ergonomic fit | |
|--|--|---|
| In terms of interior organization | Human + animal common use | Animal use |
| Additional space element (Movable furniture) |  |  |
| Fixed space element (Fixed Architecture Application) |  |  |

When the table is examined in terms of indoor organization, it is seen that fixed architectural practices are a kind of reinterpretation of existing elements, especially in terms of human-animal common use. In this case, it can be said that such applications, which can be described as adaptation design, are similar in terms of content, although they are becoming more widespread, and therefore they have lost their originality. It can be said that adaptation practices, which can be described as repetitions of each other, are based on the assumption that human animal users have an intertwined lifestyle in the same space. However, the extent to which this situation corresponds in real life is open to debate. Fixed architectural applications, which are defined as space additions in terms of indoor applications, have a much more original quality than adaptation examples, which are developed only for animal use. Although such examples are few in number, it can be said that there are promising applications in terms of design approach and original value. In this context, it can be said that the understanding of design in spaces defined as communal spaces should be based on space design rather than furniture production. Furniture designed according to the anthropometric measurements of human users, which are prioritized by commercial concerns in terms of use and ergonomic features, would be appropriate for animals to be reconsidered by using a new scale from a different perspective. In this case, it would be a good decision for designers to produce with the help of disciplines dealing with animals.

Until recently, the only option we would make of making our homes pet-friendly spaces was a scratching post, sleeping pad...etc from a pet store. it could be buying furnishings or adding a cat/dog wing to an outdoor door. However, especially with the pandemic process, the experience of living together with pets has increased, and in this direction, special architectural solutions have been started to be developed for the four-legged members of our family. These details appear as

special solutions that can be added to the fixed/moving furniture we use for our pets, to design furniture that fully functions for human-animal use, or to integrate into the interior design.

As a result, in the research conducted on the subject in line with the findings obtained, it was determined that the applications examined within the research were limited, the existing studies had methodological and theoretical deficiencies, and the subject needed to be developed in terms of the literature. However, it has been understood that the 'interior and furniture design for pets' approach is a design concept that is open to development and is preferred by users, manufacturers and designers. In addition, it has been observed that the findings obtained are mainly single furniture or space applications, the evaluation is made on examples from abroad, and the examples of local specific space and furniture applications are quite limited. It can be said that future research on the subject should be developed methodologically and theoretically, and the literature should be enriched.

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Resume

Neşe Başak Yurttaş is an Assistant Professor at the Department of Interior Architecture and Environmental Design at Biruni University. Dr. Yurttaş is an interior architect and received her Ph.D. from Mimar Sinan Fine Arts University in the field of Interior Architecture. Before becoming an academician, she had worked for 19 years as a senior interior architect in many international companies. She is currently conducting interior architecture design studio courses for undergraduate students. She has focused her research mostly on themed spaces, spatial identity, inclusive design and architectural design education.

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