

## A Study on the Interior Design of a Dog-Friendly Hotel Using Deepfake DID for Alleviation of Pet loss Syndrome

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### Abstract

*The environment refers to what is surrounded by something during human life. This environment is related to the way humans live, and presents various problems on how to perceive the surrounding environment and how the behaviors that constitute the environment support the elements necessary for human life. Humans have an interest in the supportability of the environment as the interrelationship increases as humans perceive and understand the environment and accept the factors supported by the environment. In space, human movement starts from one space to the next and exchanges stimuli and reactions with the environment until reaching a target point. These human movements start with subjective judgment and during gait movement, the spatial environment surrounding humans becomes a collection of information necessary for humans and gives stimulation. will do. In this process, in particular, humans move along the movement path through movement in space and go through displacement perception and psychological changes, and recognize a series of spatial continuity. An image of thinking is formed[1]. In this process, spatial experience is perceived through the process of filtering by the senses in the real space, and the result of cognition is added through the process of subjective change accompanied by memory and knowledge, resulting in human movement. As such, the spatial search behavior begins with a series of perceptual and cognitive behaviors that arise in the process of human beings trying to read meaning from objects in the environment. Here, cognition includes the psychological process of sorting out and judging what the information is in the process of reading the meaning of the external environment, conditions, and material composition, and perception is the process of accepting information as the first step. It can be said to be the cognitive ability to read the meaning of the environment given to humans. Therefore, if we can grasp the perception of space while moving and human behavior as a response to perception, it will be possible to predict how to grasp it from a human point of view in a space that does not exist. Modern people have the theme of reminiscing dog-friendly hotels for the healing of petloss syndrome, and this thesis attempts to approach the life of companions.*

**Keywords:** Dog friendly hotel, Pet Loss Syndrome, Deep Fake, Digital Information Display, Dog, Pet, Death, Interior Design, Architecture, Visual and Perceptual Space, Dog Loss, Dog Attachme

## 1. INTRODUCTION

In the case of Korea, along with economic growth, it was after the 1990s that general households started raising 'pets', represented by 'dogs'. This period of change is relatively recent. Accordingly, studies on social phenomena, actual conditions, and educational effects of companion animal rearing were studied from the late 1990s to 2000s, and studies on psychological effects emerged in the 2010s, and studies on mourning due to the loss of companion animals was mainly studied around the mid-2010s. According to the Agriculture, Forestry and Livestock Quarantine Headquarters, the dog registration system was implemented nationwide in 2014, and the number of registrations has steadily increased from 1,071,000 in 2016 to 1,176,000 in 2017, 2,092,000 in 2019, and 2,321,000 in 2020. 11% increase in 2020 compared to 2019. As for the status of companion animal registration by region, Gyeonggi-do had the most with 33%, followed by Seoul with 18.9%, Incheon with 5.8%, and Busan and Gyeongnam with 4.6% each. In addition, a total of 3,690 dog registration agencies are designated nationwide, of which 92.7% are veterinary hospitals and 4.6% are animal protection centers. As of the end of 2020, there are 280 animal protection centers across the country, and the number of lost and abandoned animals that were rescued, protected and abandoned was 130,401, and the related operation cost was 26.7 billion won. The number of abandoned and lost animals was 73.1% for dogs, 25.7% for cats, and 1.2% for other animals, a decrease of 3.9% from 2019. Rescued animals were treated in the order of sale (29.6%), natural death (25.1%), euthanasia (20.8%), owner delivery (11.4%), and protection (10.4%).

As for the domestic companion animal-related business, there are a total of 19,285 locations in 8 industries, and about 24,691 workers were surveyed. This is an increase of 12.4% for animal-related businesses and 9.4% for employees compared to 2019. By industry, the animal beauty industry accounted for the most at 37.7%, followed by the animal consignment management business at 23% and the animal sales business at 21.5%, and the number of employees in the animal care industry accounted for the highest with 8,741. According to Articles 46 and 47 of the Animal Protection Act, if you do not register your dog or violate related matters, you may be subject to a fine of between 500,000 and 3 million won. In addition, unregistered business, etc. shall be punished by a fine of not more than 5 million won. The steady increase in dog registration is a result of the increased awareness of dog owners, and it is necessary to continuously improve the system for the prevention of lost and abandoned animals, and to continuously improve the system for the prevention of lost and abandoned animals. Policy support considering regional characteristics is necessary. In exploring the necessary attributes of a dog-friendly hotel, the characteristics and difficulties of the companion must also be considered. The purpose of this study is to examine the companion animal loss experience of domestic companions and to study the interior design of a companion animal-friendly hotel with the purpose of healing the risk factors affecting complex sorrow in the context of companion animal mourning.

## 2. DOG LOSS AND ATTACHMENT

One of the most realistic problems in spending time with dogs is loss. The loss of a dog includes the death and disappearance of the dog. Loss in human life is an important traumatic experience that everyone experiences [2] and bereavement is a process that follows the death of a person with whom they have an important relationship [3]. Until now, only humans have been considered when defining important relationships, but studies showing that dogs form attachment relationships with humans suggest that dogs should also be included in the category of important relationships [4]. Companion owners inevitably experience the death and loss of a dog whose average life expectancy is shorter than their own, and they have no choice but to face the loss due to the death of those who follow their companionate life with the dog. Most people who own a dog express their dog as a member of the family, and when a dog dies in a situation where they give their dog a name and form a psychological attachment relationship, they feel the same sadness as

losing a family. Pet owners who experience the loss of a dog experience sadness for an average of 10 months, and this sadness tends to last for about 6 months to a year [5]. The deep sadness after a bereavement does not relieve over time and sometimes causes mental and physical pain continuously [6]. Mourning and sorrow for the loss of an object were explained by attachment theory. According to Bowlby's attachment theory, from birth, a person needs an object and tries to maintain stability through intimate contact with the object. In other words, people acquire stability by forming a close emotional relationship with a small number of specific objects in the early stages of life. Attachment relationships last throughout one's life, and it can be anything that can secure stability through intimacy, not necessarily people. Although the most common emotion that humans experience when they experience loss is sadness. In addition to sadness, you may also experience emotions such as anger or guilt. These changes are called mourning. The companion responds in a way that avoids or controls rather than accepts. As a result, the owner of the companion cannot express his grief over the loss of the dog, and he is reluctant to use any method or ceremony to commemorate the death of the dog, so he cannot go through the proper mourning process. This further complicates the dog's death. Dogs can become important human attachment targets, and since the loss of a dog causes a mourning response similar to the loss of a significant other, people who have difficulty adjusting after the loss of a dog can also experience complex sorrow. According to Wrobel and Dye, more than 85% of people reported grieving immediately after the loss of a dog, 35% of people were grieving after 6 months, and 22% of people continued to experience grief after 1 year. Confirmed. These results show that the number of people who continue to experience grief after the loss of a dog is by no means small. A study by Field Gavish and Packman found that when a dog is lost, people with strong attachments have greater difficulty in emotional regulation, and the persistent feeling of emptiness and hopelessness that they feel from being unable to regain proximity to their attachment figure due to the loss causes anxiety. It was found that attachment may act as a risk factor for complex woes. In the study of dogs, there are studies dealing with social influences and studies dealing with psychological effects. Studies on social phenomena, raising conditions, and related businesses or policies of dog rearing deal with social and economic aspects, while studies on the effects of interactions with dogs on human life mainly deal with psychological aspects, including attachment-related studies. Research, research on dogs as a psychological treatment medium, studies on the effects of dog raising experiences on the psychological development and interpersonal relationships of children and adolescents, and studies on mourning due to the loss of dogs. In the case of Western countries where companion animal culture has settled, related studies have been conducted in sociology, social welfare, veterinary medicine, medicine, and psychology[7]. It affects the quality of service perceived by users and brings about behavioral changes through internal reactions. This is based on environmental psychology, which states that the environment induces a change in the user's attitude. In particular, among various service facilities, the service landscape of a dog-friendly resort hotel is very important, where environmental factors and facility characteristics greatly affect the success of the service industry. In particular, when consumption is hedonic in a physical environment like a dog-friendly resort hotel, consumers are more closely related to their emotional state. Although most consumption is practical and functional, the perceived quality of service is higher in the physical environment, such as leisure services, restaurants, and hotels, where the motive for hedonistic consumption is strong, compared to the physical environment of services for practical purposes, such as banks or fast food restaurants. will be sensitively affected by, In other words, the longer the service is consumed or experienced for hedonistic motives, the greater the impact of the service's physical environment on consumers' emotions. The hedonistic consumer seeks emotional aspects as opposed to functional usefulness.

### 3. UNDERSTANDING OF DOG-FRIENDLY RESORT HOTELS

Destination is a compound word of stay and vacation, and refers to the phenomenon of spending a vacation at home or near the house without going far.

In the past, most vacations were to travel to a place far away from home to see things, but now people want a rest where they can focus on themselves without having to do anything. Accordingly, the trend of getting away from daily life and taking a break in a hotel in the city center is not limited to a specific age group, but is spreading.

Millennials who often visit hocation, young couples who have young children who are burdened with long-distance travel, and families with children in middle and high school who do not have time to spare due to school schedules, choose a hotel as a vacation destination and stay in a hotel for 3 nights and 4 days. cases are increasing significantly.

The trend of destination hotels, where people travel to stay in specific hotels from several years ago, also coincided with the popularity of staycation, and many people are enjoying their vacation in hotels. Hilton busan says that, as the expression “destination,” most of the customers who actually visit the hotel come to enjoy Hilton Busan rather than to travel to Busan.

More and more people are looking for hotels as a travel destination, and travel trends are changing a lot. Instead of traveling around in a hurry, more and more travelers are taking leisurely vacations in the hotel, such as relaxing, swimming and exercising, and relieving fatigue by taking a half-bath.

### 4. DEEP FAKES IN EVERYDAY LIFE

'Deepfake' is a compound word of 'deep learning' and 'fake', and refers to an edited version that uses AI technology to synthesize a character's face into a specific video. Deepfake technology recreates historical facts or characters from the past as if they were real, or uses artificial intelligence to create artificial voices on behalf of people with hearing impairments to enable conversations with others. Deepfakes ensure that producers of manipulated visual media are not limited to experts who are well versed in media creation or manipulation techniques, such as in paintings and photography. There is no need to be limited by the ability of the person making the video because a well-manipulated result is produced just by collecting photos or videos and putting them into the machine. In addition, deepfake dramatically lowers the time and cost required for video manipulation and most of the know-how for producing good results is also disclosed online. Video can be created [8].

**Table 1. Deepfake Technology Trend**

Development Agency	Product, Algorithm name	Technology	Shape
Washington Univ. Research Team		Creating a video with natural lip sync using audio file	Video
Professor Michel Zollhofer's. Research Team	Deep Video Portraits	3D type of motion reproduction, not just the face, Target image creation using GAN technology	Video
Samsung Electronics Moskva AI Lab	Realistic Speaking Face Video	Create a video that speaks or makes a facial expression with just one photo	Video
ADOBE	Voco	Create audio from whoever you want just by typing	Voice

However, deepfake technology is a technology that can be easily exploited for forgery and falsification of video data in that it is difficult for users to recognize the manipulation results of the original video.

This is worrisome in that it can cause various social problems, such as infringement of portrait rights and copyright problems. With the information technology (IT) boom in the early 2000s, it is a deepfake considering that Generation Z, who has been exposed to digital environments such as the Internet since childhood, engages in almost all activities online and has a high proportion of video use. Learner-centered information and communication ethics education that can respond to the problem of false information and cultivate correct information and communication skills must be conducted.

## 5. CONCLUSION

Large digital information display is being applied to kiosk or smart signage today based on the advantage of being connected to the web and collecting or producing various information. However, unlike the interface environment of smartphones or desktops, DID, which performs various tasks while in front of a large-screen display, has a significant cognitive and physical burden in the process of using the device. The characteristics of these devices can cause continuous problems in the process of understanding and searching information, and reduce the practical utility of large DIDs. While seeking the direction of UI design suitable for the interface environment of large DID, we want to use DID for the purpose of healing for companions who have lost their dogs and are suffering from petloss syndrome. Along with the application, it is intended to be applied as a content of a dog-friendly hotel. In this study, the interior design of a dog-friendly hotel for alleviation of petross syndrome was studied. We want to approach the pain of the companion who is suffering from petloss syndrome under the theme of the companion's recollection of the dog with the technology of deepfake. It is hoped that the study of dog-friendly hotels will continue as pet-los syndrome is treated and alleviated by pet owners through reminiscences of dogs.

## REFERENCES

- [1] Kwon Young-geol, "16 Lectures on Spatial Design", *Book Publishing International*, p73, 2001.
- [2] Song Hyeon, & Lee Young-soon (2011), The Effect of Psychological Toughness and Emotional Intelligence on Post-Traumatic Growth: Focusing on the Mediating Effect of Active Coping, *Counseling Studies*, 12(4), 1231-1246.
- [3] Kim Joo-shim (2013), The effect of acceptance and commitment therapy on mourning, self-esteem and psychological well-being of middle-aged women who have experienced bereavement, Master's thesis, Kyungsung University.
- [4] Minji Jung (2018), The experience of loss of an adult companion animal and complex sorrow, Master's thesis, Ewha Womans University.
- [5] Hyo-Jeong Mo (2015), Grief due to the loss of companion animals, Symptoms and Coping with Pet Loss Syndrome, *Human Environment, Future*, 15, 91-120.
- [6] Hyunah Jang (2009), Concept and Diagnosis of Complicated Grief, *Journal of the Korean Psychological Association: General*, 28(2), 303-317.
- [7] Hyo-Jeong Mo (2015), Grief due to the loss of companion animals, Symptoms and Coping with Pet Loss Syndrome, *Human Environment, Future*, 15, 91-120.
- [8] Choi Soon-wook, Oh Se-wook, and Lee So-eun (2019). Image manipulation of deepfakes: Crisis of fact and creation of punctum by deep automation. *Media, Gender & Culture Vol. 34*, pp.339-380.