International Journal of Engineering & Technology, 7 (3.24) (2018) 158-162



# **International Journal of Engineering & Technology**

Website: www.sciencepubco.com/index.php/IJET



Research paper

# A Study on Scenic Road according to Place Concept and Cognition Method Focusing on cases of Korea and Germany

Ja-Hyun Lee<sup>1</sup>, Jun-Gi Lee<sup>2</sup>, Kyung-Hee Lee<sup>3\*</sup>

<sup>1</sup>Department of Architecture, Pusan National University, 2, Busandaehak-ro 63beon-gil, Geumjeong-gu, Busan, Republic of Korea, 46241

\*Corresponding author E-mail:samlgh@pusan.ac.kr

#### **Abstract**

**Background/Objectives**: It is necessary to improve the environment of the road, which is the main cause of air pollution, to construct roads that demand sustainable development and pursue a valuable environment.

Methods/Statistical analysis: The infrastructure is created by the arrangement of the linear space as the path is provided to the dotted tourist spot. Thus, we have an identity that links places and places with nature. In order to recognize these places, Kevin Lynch 's urban image concept and detail characteristics analysis method were analyzed. The relationship between the forms of the road and other places was identified.

**Findings**: The two landscape roads have a distinctly different route. This shape makes it easier to understand the meaning of the place and the landscape and focus on the relationship. Through the morphological meaning, we were able to identify the elements that can distinguish between urban history and planned cities or spontaneous cities. The landscape of Korea, which is laid horizontally along the coastline, can be regarded as a 'soft space', and Germany, which has a stronger image in the urban structure leading from the scenery road to the aisle, can be regarded as 'hard space'.

Analysis of the detailed characteristics of the city can help to grasp the distance and relationship between the road and the place, and helps to understand the urban structure. It can be seen that the historical and cultural tourism center where the place is important shows the city more clearly, and the scenic road with the high scenery is more clearly drawn.

**Improvements/Applications**: If the environment is preserved and the value of the resource is increased, there will be a positive impact of the road environment. However, a plan that excludes the place name property is not effective.

Keywords: Scenic Road, Romantic Road, Place, City Image, Feature Analysis

### 1. Introduction

Roads function as original paths and are physical elements that make up a city. As the industry has developed, it has resulted in environmental destruction and loss of ecological resources due to the quantitative increase of road construction which brings convenience and economic gain.[1] Recognizing that it is an urgent task to improve the road environment, we should pursue the construction of roads that preserve the surrounding environment or add environmental value. Especially, as the main cause of air pollution, it is pointed out that the exhaust gas emitted from the road and the elements constituting the road. Therefore, improvement of the road environment is required for sustainable development.

So the Ministry of Land in Korea has been giving meaning to the road since 2000 and developing 'Beautiful Road' or 'Scenic Road Construction Project'. This has led to the search for a special place to enjoy leisure time as the number of car supply increases and the value of life changes and the desire for a new environment increases. This has led to a demand for scenic roads in anticipation of special natural, historical and cultural environments and distinctive places

The development of linear tourism resources that link places and places, rather than sightseeing sites, has already been experienced in developed countries in Europe and the United States. The cities of Europe became modernized by the development of transportation as urbanization progressed and the living radius became wider after the Industrial Revolution. In Germany, the construction of the highway in the 1930s was a great opportunity to extend the living rights to economic growth and communication. On the basis of the developed road network, the German Tourism Board plans a theme route and it is called a theme road or a scenic road which connects humanistic elements. As the paradigm of transportation changes and the propagation of the Recreational Culture becomes a boom of travel, demand for expansion of infrastructure such as road construction becomes a combined driving force for economic growth.

Currently, there are about 150 scenic roads in Germany called Roads (Strasse), which provide a path for tourists and other local people to explore and curiosize with diverse interpretations according to cultural and historical differences. Of these, only 12 are recognized by the German Tourism Association, which can improve ongoing development and quality with professional information and communication that has the infrastructure to create professional marketing and cost-generating opportunities.[2]



<sup>&</sup>lt;sup>23</sup>Department of Architectural Engineering, Pusan National University, 2, Busandaehak-ro 63beon-gil, Geumjeong-gu, Busan, Republic of Korea, 46241

Among the German scenic roads, the romantic road is the most famous, so I borrow ideas from other countries and build the country's scenic roads. Especially in Korea, there is a scenic road that has been completed in 2011 under the name of "Romantic Road" and operated until now. Therefore, this study analyzes the concept of German road, its management plan, and the relation between place and road, and suggests the problem and improvement direction of the present condition of road as compared with Korea 's "romantic road".

#### 2. Materials and Methods

#### 2.1. Place and Placeness

The most important design concept of scenic road is place character. It is possible to create a spatial infrastructure with a linear spatial arrangement while providing a route to points of sight. The landscape, which is a part of nature, and the infrastructure such as routes and roads that connect it are also regarded as culturally organized nature and considered as an ecological space. The road is not a simple connecting tool but a material that contains both cultural and aesthetic sense, which is connected by a path.[3]

As a concept different from space, places are mentioned in various academic fields and it has a dictionary meaning to indicate geographical location. It is judged to be a form of identity, an old form of value that combines social space, spatial structure, morphology, and type. [4] Or externally, in a context associated with others, localized as part of a real and wide area of order, and situated in a relationship that is created and changed or extinguished in the flow. The concept of 'hard space', which is a fence of social activities, and 'soft space', which is an intangible element governed by a natural environment. [5]

One such argument is that Norberg-Schulz has stated that "places are special places, and are routinely places of reality and are perceived as a spirit of the past." We can confirm that various concepts are included and interpreted. It can be recognized that this space is an experiential space composed of individual, social, historical and cultural perspectives. [6]

In the process of being perceived in space, place nature changes as a result of experience in the flow of time. In addition, the social space of the primary space, the residential space, the secondary space Finally, the spatial perception of the tertiary space in the space of movement is different. Therefore, the place in the city needs to be expanded in three dimensions. [7]

The concept of placeness can be said to be locality by pointing out specific city, place, culture and historical characteristic as positive image. On the scenic roads such as the romantic road, there is a theme connecting the places. The landscape of the city is formed by images.

This concept of placeness is expressed by identity, history, and locality as judged by symbolic, emotion, and value formed by physical environment and human activity. On the scenic roads such as the romantic road, there is a theme connecting the places. The place has a degree of perception depending on the degree of human individual experience, and the meaning changes in the temporal, cultural and social context.

#### 2.2. Cognitive of place.

## 2.2.1. Kevin Lynch

The US urban planner explains Kevin Lynch's five urban image components and tried to prove imageability, legibility and identification of the environment. He extract the city image and extract the path, node, landmark ,District, and Edges the main

cognitive element. The place where the combination of various complex elements, not the result of one image, can be explained by various recognition methods[8].

The study of urban image is necessary because it provides the image richness among the related elements of the city and can expect the improvement of the quality of life. When the historical and cultural image of the city is combined with the landscape, the language of the city will become richer and bring out a positive image. This result stimulates the psychological factors that can be communicated with the important cities of the local people or other local people by increasing the orientation of the city and gives a sense of stability.

#### 2.2.2. Feature Analysis

What we recognize as a shape or an object again is called a pattern-recognition. By looking at things in the outside world and knowing what they are, it is a process of comparing the representations of objects to those of memories or basic representations of visual objects already stored inside.[9]

One of the methods of pattern recognition is to recognize and interpret features based on the detailed characteristics of objects. Geometrical analysis such as vertical, horizontal, and curved lines of a specific object is performed, and patterns between relations are generated

What is effective in analyzing the detailed characteristics of a place is to look at the shape and type of the path, which is the passage of the city. The roads exclude the characteristics of the place and clearly show the arrangement and arrangement of the buildings, or they may be connected or disconnected between places. Sometimes there are hierarchies and types between places, so in this situation, roads can be divided into largely naturally occurring roads and roads made by plans.[10]

Spontaneous roads have organic characteristics, and the creation of artificial roads involves a new order of landscape. This detailed feature analysis can easily judge the horizontal system and reflects the social situation. It is possible to assume that the form of the road gives a flow of people's stay time and traffic speed. It can be considered as a factor that can work when choosing the route to the destination. Therefore, it will be helpful to plan what kind of scenic roads you can attract and keep people attracted.[11]

# 3. Results and Discussion

South Korea benchmarked of the' romantic road', which is best known to tourists in Germany. It is the concept of these road to connect places with landscapes and attractive sights. However, it can be seen that the constituent concept vary depending on the positional situation as shown in the figure 1. Therefore, it is possible to compare and analyze the concepts ans elements of each scenic road of Germany and Korea through the concept of the place and the cognitive method. In this way, the relationship between the place and the road can be analyzed.



Figure 1: Route of Scenic Road in Germany and Korea

#### 3.1.1. German Romantic Road

An internationally popular romantic road crosses 29 towns and villages, crossing the state of Badenwuertenberg and Bayern, with easy-to-find signs providing information on all parts of the country. It was already the longest route north of the Alps and served as an important link between the south and the north of Europe, a path that the Romans had already attained since 2000 years ago. It is an area of 460 km distance, and it became an important theme connecting the cities for the historical reason of the route of the middle age.

As it became known as a US military recreation area in Germany, the number of Japanese tourists became known, so that the number of Japanese was written on the sign, which accounted for 90% of the tourists. Recently, we have shared the methodology of romantic gauging in Japan, Brazil and Korea which benchmarked it.[12]

The route consists of four things: cars, buses, bicycles, and walking. The roads and the revolving roads are designed to be

almost in line with the green space. There are sections that run through the center of the city and run around.

It is a route connecting beautiful medieval castles and religious buildings designated as World Heritage sites. The marketing and operation of each region are mutually cooperated, and the romantic road tourism association is in operation.

#### 3.1.2. Korea Romantic Road

Completed in 2011, the Romantic Road on the East Coast of Korea connects 22 centers by utilizing historical and cultural resources including 210 km coastal landscape resources. It is designed to revitalize urban tourism and to alleviate the problems of seasonal tourism industry. It is a new system that is made up of the first advanced tourism road in Korea and the mutual exchange and cooperation between the regions.

Unlike the rural landscape resources that cross the inland according to the historical background of the romantic walk, landscape resources along the coastline were utilized. Spatial connectivity extending from the center to the inland can be found.

Table 1: Comparison of Scenic Road

Table 1: Comparison of Scenic Road		
	German romantic road	Korea romantic road
Location	Inland area	Seaside area
Distance	460km	210km
Theme	Medieval history cultural heritage center	Natural scenery center
Citty center	29 Middle, small city	22Tourist center
Transportation	Car, Bus, Bicycle, Walking	Car
Sign	Garnisch-P. 45 km 23 Wildsteig 6 km 23 Deutsche Alpenstraße Romantische Straße	Romanile Road or A.

In Table 1 summarizes the two roads. As such, it can be seen that the length and position are different and the theme of important concept is different. Therefore, it can be seen that the interpretation of the concept is different because the types of landscape roads are different.

#### 3.2.1. Placeeness and Cognitive

The two landscape roads have a distinctly different route. The

sightseeing route connecting each place and place is parallel to the sceneryas shown in the figure 2. However, in Germany, the place is known due to the new node and the passage derived from the place.

It is a route with a pronounced natural coastline in Korea, it can be seen that the scenery that faces the natural scenery is more important than the route derived from the sightseeing spot. The hard space mentioned by Trancik is strong in German landscape

and the soft space can be strong in Korea. People can feel the sense of security in the mountains and fields surrounded by the inland and the sense of openness surrounded by the sea and the rock, as well as the emotional difference in the context of the road

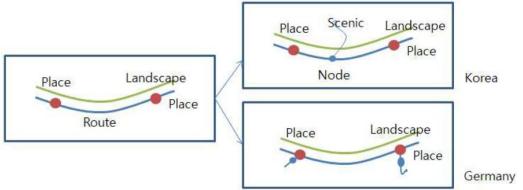


Figure 2: Comparison of Route

According to Kevin Lynch's theory, we can see the relationship between passages and defects and how they are derived. And by the analysis of the detailed characteristics, it is clear that the relationship between the place and the passage is clear, and there is a clear city division of the city with the old history. In the case of Germany in figure 3, it is possible to determine the shape of the place being moved around at a certain distance between the road and the place. It is possible to grasp that it has been partitioned as if it were a planned city where long traces remained intact.



Figure 3:.Satellite picturein Rotenburg(left) and Noerdlingen(right)

In the case of Korea in figure 4, the shape of a monotonous road along the coastline can be confirmed. And the towns and cities are spontaneous, and it is not enough to play a role of a sightseeing

place. In other words, it is a route to appreciate the scenery that you are looking at.



Figure 4:.Satellite picturein Daejin(left) and Balhan(right)

#### 4. Conclusion

In this paper, the general concepts, components, and criteria of landscape roads are analyzed, and the spatial analysis concept based on them analyzes the significance of place properties and can be a strong axis as a path.

The Korean-style romantic road has a positive effect that the construction of the scenic road that preserves the environment and enhances the value of the resource should be promoted in the

future as the value of green tourism.

However, Kevin Lynch's theory presented in the analysis method is the spatial analysis and the relationship between the road and the place through the method. A place is a concept that can be changed depending on the situation or location. Even if it is designed with the same design concept, it should be focused on clarifying the intention according to the design direction because it is the result obtained through the relationship.

Germany has been developing landscape roads since the 1920s, but the romantic road in Korea has a short history of less than 10 years. Through the systematic management, marketing and research like Germany, it can be a new tourist resource when we look at the long-term perspective after the unification in the future, and the distinctive line connecting the Korean peninsula will exist. We must concentrate our efforts on the place that has an efficient theme that is distinctive to the region rather than the external scale. The planning and construction of the scenic roads should result in preserving the scenery or improving the value and not interfering with the overall image of the city and the city.

# Acknowledgment

This research was supported by Basic Science Research Program through the National Research Foundation of Korea(NRF) funded by the Ministry of Education(2017R1D1A1B03032859)

# References

- Particulate emissions and population exposure. Available from: <a href="https://www.oecd-ilibrary.org/environment/environment-at-a-glance-2015">https://www.oecd-ilibrary.org/environment/environment-at-a-glance-2015</a> 9789264235199-en
- [2] Information Romantic Road .Available from https://www.romantischestrasse.de/
- [3] Hvattum, Brita Brenna, Beate Elvebakk and Janike Kampevold Larsen; Routes, Roads and Landscapes; c2011. P.5-10
- [4] Kim Dovey; Urban Design Thinking –A Conceptual Toolkit; c2016. p.105.
- [5] Roger Trancik; Findind Lost Space; c1986
- [6] Norberg Sculz; Genius Loci: Towards a pjenomenology of Architecture; c1991
- [7] Relph,E.; Place and Placelessness; 1976
- [8] Kevin Lynch; The Image of the City. MA; MIT Press; c1960
- [9] Bin Jiang, Christophe Claramunt; Topological Analysis of Urban Street networks; Environment and Planning B; 2004 Jan; p 151 -162
- [10] J.A. Benediktsson; M. Pesaresi; K. Amason; Classification and feature extraction for remote sensing images from urban areas based on morphological transformations; c2003 sep; p 1940-1949)
- [11] Duncan Black, Vernon Henderson; A Theory of Urban Growth; c1999 Apr
- [12] Franz Bogner; Die Romantische Strasse von oben; 2017