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REDESIGNING A NEGATIVE SPACE THROUGH CPTED IN SUSUKINO DISTRICT, SAPPORO, JAPAN

ABSTRACT

As an impact of prostitution site, criminality is basically triggered by a negative space; however, prostitution site in Japan is a part of the city. *Susukino* in Sapporo, for example, plays a role as a tourist attraction as well as a prostitution site. This research aims to figure out how the architectural design in *Susukino* influences criminality prevention as an effect of prostitution site. Survey and interview were conducted to observe the zonation in *Susukino* and to define a negative space as a problem of the district. Later, seven aspects: ❶Defensible space, ❷Territoriality, ❸Surveillance, ❹Lighting, ❺Landscaping, and ❻Physical security; based on CPTED (Crime Prevention Through Environment Design) theory were applied as a basis to improve the quality of the street in the negative space by purifying the landmark and activating the street by adding positive functions.

Keywords: *Negative Space; Prostitution; Tourism; CPTED.*

INTRODUCTION

Differ from other eastern culture, prostitution in Japan is legally allowed, and It is accustomed with the tourism. *Susukino* in Sapporo is one of the examples. As one of the biggest red-light districts at the most northern of Japan, Brothels at *Susukino* are counted as the supporting services for sexual demand during post-war recession (Bloomberg,2013). Showing by the survey conducted by BOJ (Bank of Japan), From 63 stores, the number of brothels rose to 264, while the number of restaurants in the district declined by 14% between 1989 and 2008 (Bloomberg, 2013). This makes *Susukino* become an interesting place as an entertainment district both locally and globally. This district is not only satisfying the users, but also bolstering up the economy as a tourism site. Besides, the existence of prostitutions in the district brings a dilemma because it attracts gangsters then ended by criminality.

Through site observation, interviewing the inhabitants, identifying the land use, and categorizing the area; this research aim is to figure out the problem of the district and the solution on how the architectural design in *Susukino* prevent criminality based on Crime Prevention Through Environmental Design (CPTED).

THEORICAL FOUNDATION

In accordance with the term, CPTED is basically managing the safety through designing the environment. Proper design and effective use of the built environment are required in order to reduce the incidence and concern of crime (Lim, Tow Fok;, 2003). Indeed, this successively results in enhancements within the quality of life (Lim, Tow Fok;, 2003).

To get it completely how CPTED is utilized, one must look at its components and the reasoning behind them. In spite of the fact that wrongdoing avoidance through plan is itself moderately modern, its person components are common security strategies. The uniqueness and fruitfulness of CPTED stems from the way in which these strategies are coordinates with, and connected to, the building design process (Gardner, 1981) :

- (1)Defensible space (Providing maximum control by design characteristics to create defining areas),
- (2)Territoriality (A sense of place ownership),
- (3)Surveillance (A high degree of visual control),
- (4)Lighting (Enhancing natural surveillance and reducing fear),
- (5)Lanscaping (Marking the transition between zones),
- (6)Physical Security (Making penetration more difficult and time-consuming).

METHODOLOGY

In order to discover the problem at *Susukino* district, an observation was conducted. Then, came up with 'negative space' as the reason why the district is unsafe. Afterwards, a deep investigation focussing on land use obtained zoning maps. Each zoning map, later, was compared based on the interview's and survey's results to determine 'the most unsafe district'. Lastly, few recommendations based on CPTED were applied into designs

RESULTS and DISCUSSION



1. NEGATIVE SPACE




Deep inside the most entertaining district in Sapporo, Susukino area showed another face in between buildings and its entertainment facilities. “In Most cases, it was reported that most of the non – surveillance spaces have high tendencies for negative functions”, as stated in the paper entitled “The Enhancement of spaces in between buildings as urban recreation development”. This statement along with the author’s observation, a negative space in Susukino was identified by three criteria: (1) a long aisle between two buildings in which have an extreme proportion between building’s height and distance; (2) a space having negative functions; (3) a space with a minimum lighting. Those characteristics implied ‘not visible space’ and indicated ‘unsafe space’.

2. LAND USE IDENTIFICATION AND CLASSIFICATION BASED ON CPTED

Crime Prevention Through Environmental Design is a method how the architectural design prevents the criminality. There are six aspects in CPTED (Gardner, 1981): (1) Defensible space, (2) Territoriality, (3) Surveillance, (4) Lighting, (5) Landscaping, (6) Physical Security.

CPTED was applied as the basic to spot and classify the area based on its safety level by observation and interview. There were eleven criteria on observation and interview: (1)function, (2)visitors, (3)working time, (4)robbery, (5)drunkard, (6)police patrol, (7)lighting, (8)accessibility, (9)atmosphere/situation, (10)transparent elements on façade, (11)proportion of building height and distance (Table 1).

| Zone Area | CPTED Criteria | Aspects on Observation and Interview | Results |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|--------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|
| Blue Zone  PROSTITUTION AREA CONVENIENT STORE, DWELLING/MID-RISE | [D][La][T] | Function | Dwelling, Mid-Highrise Apartment |
| | [D][T] | Visitors | Woman 70%; Men 30% |
| | [S] | Working Time | 18.00 – 4.00; There is activities at night → some restaurants and stores |
| | [T][L] | Robbery | No |
| | [T] | Drunkard | No |
| | [S] | Police Patrol | No |
| | [L] | Lighting | Yes; Store’s lighting (Major) and three street lighting (Minor) in between two buildings; Main street → street lighting (Major) |
| | [D] | Accessibility | Main street and space between two buildings (few) |
| | [T][La] | Atmosphere/Situation | Quiet; not scary |
| | [S][P] | Transparent Elements on Façade | 70% of façade is transparent |
| | [D][L][La] | Proportion of Building Height and Distance | Main street: 40m height and 15m wide A space between two buildings: 36m height and 1,8m wide |
| Red Zone  | [D][La][T] | Function | Prostitution, Bar, Restaurant, Hotel, Karaoke, Game Center, Parking |
| | [D][T] | Visitors | Women 50%; Men 50% |
| | [S] | Working Time | 17.00 – 4.00; few activities from morning to afternoon; this area is alive at night |
| | [T][L] | Robbery | No |
| | [T] | Drunkard | Yes; Many |
| | [S] | Police Patrol | Yes; Rare |
| | [L] | Lighting | Many; Majority from the building |
| | [D] | Accessibility | Main street and secondary street; not many spaces between |

| | | | |
|-------------------------------------------------------------------------------------------------------|------------|--------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|
|  | [T][La] | Atmosphere/ Situation | two buildings; some of them are used as culinary street Crowded; not scary |
| | [S][P] | Transparent Elements on Façade | 99% façade is transparent, especially in the 1 st and 2 nd floor |
| | [D][L][La] | Proportion of Building Height and Distance | Main street: 48m height and 24m wide Secondary street: 40m height and 15m wide |
| | | | |
| <p>Yellow Zone</p>  | [D][La][T] | Function | Temple, Office, Dwelling, Very Few restaurants |
| | [D][T] | Visitors | Women 50%; Men 50% |
| | [S] | Working Time | 8.00 – 17.00; Less activities at night. This area is mostly office → alive in the morning until evening |
| | [T][L] | Robbery | No |
| | [T] | Drunkard | No |
| | [S] | Police Patrol | No |
| | [L] | Lighting | Less light but not spotlight; street lights; a lot of shadow area |
| | [D] | Accessibility | Main street and secondary street lights; a lot of shadow area |
| | [T][La] | Atmosphere/ Situation | Not really crowded; not scary |
| | [S][P] | Transparent Elements on Façade | 70% of façade is transparent |
| | [D][L][La] | Proportion of Building Height and Distance | Main street: 48m height and 24m wide Secondary street: 40m height and 15m wide |
| | | | |
| <p>Green Zone</p>  | [D][La][T] | Function | Prostitution: Love hotel, Bar, Karaoke |
| | [D][T] | Visitors | Young people (17 – 19 years old) |
| | [S] | Working Time | 17.00 – Late night; No activities in this area, but few restaurants in the main street open before 17.00 |
| | [T][L] | Robbery | No |
| | [T] | Drunkard | Yes, Especially women |
| | [S] | Police Patrol | Yes, Some |
| | [L] | Lighting | Very limited and spotlight; neon colour; a lot of shadows. Majority from billboard; minority from street light |
| | [D] | Accessibility | Secondary street; no space between two buildings but there are many intersections/ways to access |
| | [T][La] | Atmosphere/ Situation | Only crowded in front of the street (there are bars and karaoke); but inside the street is quiet (activities are |
| | | | |


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|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|--------------------------------------------|-------------------------------------------|
|  | | | concentrated inside the building) |
| | [S][P] | Transparent Elements on Façade | Less than 40% of façade is transparent |
| | [D][L][La] | Proportion of Building Height and Distance | Secondary street: 12m height and 12m wide |
| Legend: | | | |
| [D]efensible space – accessibility access physically (lock doors and fences) and symbolically (pattern and material differentiated the zones (Gardner, 1981) | | | |
| [T]erritoriality – Individual's perception of and their ownership of the environment (Gardner, 1981) | | | |
| [S]urveillance – Informal (the intensity of visual connection) and formal (security patrols and electronic monitoring) visual control (Gardner, 1981) | | | |
| [L]ighting – strengthening natural surveillance and creating a sense of territoriality: by avoiding bright spots and shadows, by creating a bright and cheerful environment, and by lighting up the criminal without spotlighting the victim (Gardner, 1981) | | | |
| [La]ndscaping – maintaining corridors to be opened visually, displaying zonal differentiation, and generating a sense of ownership by an attractive environment (Gardner, 1981) | | | |
| [P]hysical Security – Having more difficult and time consuming penetration (Gardner, 1981) | | | |

Table 2. The existing conditions of the connection street between green and red areas, prepared by the author

There were two solutive designs in order to improve the quality of the street. First solution was purifying landmark of the green zone (king XHMU and karaoke EL-CASA) by demolishing the billboards, changing the lighting ambience from neon colour to vivid colour such as in the red zone, using the building façade as lighting, and creating a light-up pedestrian walkway (Figure 2.). These were important to create a new brand image of the street from a lifeless and dangerous ambience into a bright and cheerful environment. As stated by Robert A. Gardner, having a pleasing environment would develop the sense of ownership which would increase the territoriality aspect. Moreover, by using the façade as lighting would change the domination of bright spots and shadows to be diffuse lighting.

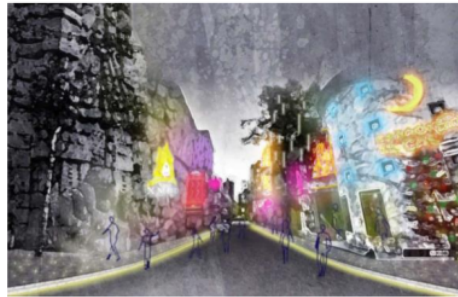


Figure 2. A perspective of the main face of the green zone, prepared by the author

The second solution was triggered by the new finding along the street. There was a gap between the existing functions (bars, love hotels, discotheques) and the music hall (ZEPP). The idea was to activate the street by adding positive functions related to young people (17+ years old) because the visitors were mostly in that range. Restaurant, food stalls, cafés, game centres, reading corners, and the like were the proposed functions (Figure 3.). Besides, the space gap was a parking lot. Then, the idea was to cover the outer line, which attached to the street, by restaurants, food stalls, and the like (Figure 4.). This method would able to remain both functions: parking lot and added functions.

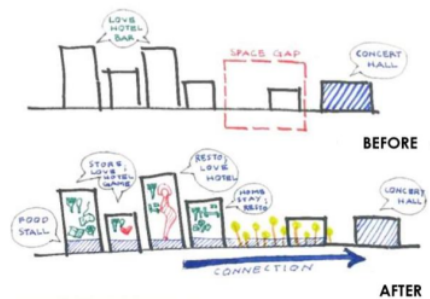


Figure 3. An illustration of a connection passing through the space gap, prepared by the author

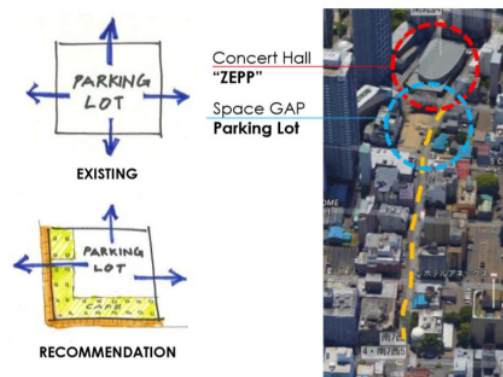


Figure 4. An illustration of how to add the positive facilities into the space gap, prepared by the author

Moreover, the proposal also concerned on the surveillance and ownership development. As shown on the figure 5, the first-floor areas were open visually by 90% transparent façade. This made the street ambience livelier and increasing visual connections. The addition of street lightings was expected to boost the lively nuance.



Figure 5. A perspective of a connection space near the space gap, prepared by the author

CONCLUSION

As the most unsafe area in *Susukino* district, redesigning a negative space in there by penetrating the red zone to the green zone must pay attention to six existing conditions: billboard, street landmark, pedestrian walkway, street length, function and facilities, and lighting, which represented defensible space, territoriality, surveillance, lighting, landscaping, and physical security in CPTED theory. Later, those six existing conditions triggered the author to come up with seven solutions to bring a safer and livelier ambience to the green zone: (1)demolishing the billboards, (2)changing the lighting ambience from neon colour to vivid colour such as in the red zone, (3)using the building façade as lighting, (4)creating a light-up pedestrian walkway, (5)using the façade as lighting, (5)activating the street by adding positive functions related to young people, (6)covering all first-floor areas by 90% transparent façade, and(7) adding street lighting

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