

## RELATIONSHIP BETWEEN TRANSFORMATION OF CIVIC CENTER AND RECLAMATION OF MOAT IN CASE OF 7 CITIES BASED ON JAPANESE CASTLE-TOWNS

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### ABSTRACT

*This paper aims to clarify how to form civic center and how to break castles in the castle districts from the Meiji era to the present day, analyzing cases of 7 prefectural capital cities of the Chubu region based on Japanese castle-towns where civic center was formed in the castle districts in the present day. Findings are as follows. First, about reclaimed rate of moat, average reclaimed rate of moat is 28.6% (1910), 52.7%(1940), 74.0%(1970) and 69.1%(2000). Second, as a result of analyzing changes of land use, as time goes on, ratios of cultural facilities and educational facilities are higher. I mention specially that there is a great difference after that whether land use of the castle districts in 1910 is military installations or private land. That is to say, if land use of the castle districts in 1910 is military installations, reclaimed rate of moat is low and land use of the ruins of a castle is cultural facilities and educational facilities, and if land use is private land, reclaimed rate of moat is high and land use of the ruins of a castle is private land. Third, as a result of analyzing area of civic center, area of civic center was expanding after World War II. Fourth, there are two turning points from feudal space to modern space.*

### INTRODUCTION

In the early Meiji era (about 1870) in Japan, government and municipal offices were built one after another in prefectural capital cities by "abolition of the Han system". Many Japanese castle-towns were selected as prefectural capital cities. In the castle districts of Japanese Castle-Towns, government and municipal offices gathered each other to form civic center, and castles were broken at the same time. After World War II, People were interested in protection of cultural properties, and the ruins of a castle were recognized as precious cultural properties. After this it is important to face urban renewal as to harmonize with civic center and the ruins of a castle.

This paper aims to clarify how to form civic center and how to break castles in the castle districts from the Meiji era to the present day, analyzing cases of 7 prefectural capital cities of the Chubu region based on Japanese castle-towns where civic centers were formed in the castle districts in the present day (Figure 1). Castle district in this paper is defined as "castle and samurai district where are enclosed by natural features such as river and mountain, and man-made features such as moat and earthwork fortification" and civic center as "public districts where public facilities such as city offices, prefectural offices, libraries and parks, were concentrated". I pay attention to reclaimed rate of moat as the state of broken castles. Yamori K. (1978) analyzes how to use sites of castles after Meiji era about some case studies. Yoshimura T. (1990,1991) pay attention to water areas and analyzes transformation of them in castle cities. I analyze change of moats and surroundings by numerical and diagrammatical analysis.

About method of study, first I draw castle district maps by city maps of four periods (table 1), and I calculate reclaimed rate of moat of each four periods (1910,1940,1970,2000). Second, I measure area of military installations, government and municipal offices, cultural facilities, educational facilities, private lands and roads in the castle districts to grasp changes of land use. Third, I measure area of civic center of each four period in the castle districts to grasp changing process of civic center.



Figure 1: The location of case study cities

Table 1: List of materials to draw maps

	circa 1850	circa 1910	circa 1940	circa 1970	circa 2000
Kofu	Kaihou Kofu Ezu 1849 owned by Yamanashi Prefectural Library	Revised map of Kofu 1902 *1	Map of Kofu 1940 *2	Detailed map of Kofu 1966 *3	Google map 2007 *4
	Sunpu and environs map 1868 owner unknown	Detailed map of Shizuoka 1903 *1	Detailed map of urban area in Shizuoka 1938 *2	Detailed map of Shizuoka 1966 *3	
Toyama	Toyama castle map 1831 owned by Toyama Municipal History Museum	The newest complete map of Toyama 1908 *1	The complete map of Toyama 1936 *2	Detailed map of Toyama 1966 *3	
	Map of Kanazawa 1828 owned by Toyama Susumu Nanpo	The complete map of Kanazawa 1898 *1	The map of urban area in Kanazawa 1937 *2	Detailed map of Kanazawa 1966 *3	
Fukui	Fukui castle map 1865-1868 owned by Fukui Prefectural Library	The map of Fukui 1908 *1	The map of urban area in Fukui 1933 *2	Detailed map of Fukui 1966 *3	
	Map of Nagoya and Atsuta middle of 18 century owned by Tokugawa Museum	The surveyed Map of Nagoya and Atsuta 1896 *1	The complete map of Nagoya 1940 *2	The complete map of Nagoya 1966 *3	
Tsu	Toutsu castle map Last of Edo period owned by Keio University Library	The newest complete map of Tsu 1918 *1	The ground plan of Tsu and environs 1931 *2	Detailed map of Tsu 1966 *3	

\*1 The source: "Compilation of Japanese city map in Meiji and Taisho era" (1986)Kashiwashobo Publishing Co., Ltd  
 \*2 The source: "Compilation of Japanese city map in early Showa era" (1986)Kashiwashobo Publishing Co., Ltd  
 \*3 The source: "Catalogue of Japanese city map-a part of prefectural capital cities" (1966)Inbu-nsha Publishing Co., Ltd  
 \*4 The source: <http://maps.google.co.jp/>

## RECLAIMED RATE OF MOAT

Average reclaimed rate of moat is 28.6% (1910), 52.7%(1940), 74.0%(1970) and 69.1%(2000)(figure 2). At present, there are two cities (Shizuoka and Nagoya) where many moats are kept (reclaimed rates of moat are below 50.0%) and five cities (Tsu, Kanazawa, Toyama, Fukui and Kofu) where many moats are broken (reclaimed rate of moat are more than 70.0%). In Nagoya, reclaimed rate of moat in 2000 are smaller than 1970. Because Seto electric railway that run along outside moat was abolished in 1976, and outside moat was preserved now.

About reclaimed time of moats, there are 5/7 cities where moats were reclaimed in 1910. As to two cities where moats were not reclaimed in 1910, moats were reclaimed between 1940-1970 in Nagoya, and between 1940-1970 in Kanazawa. There are 6/7 cities where inside moats are kept in 2000. In Shizuoka where inside moat was reclaimed in 2000, inside moat was reclaimed in putting military installation in 1896, but middle moat that is located at the edge of military installation is kept in 2000. From these results, inside moats tend to be kept.

Kanazawa is the only not afflicted city in 7 case study cities. In Kanazawa, 100 kens of moats were reclaimed in the end of the Meiji Period (about 1910), Swan moat and Harpoon moat were reclaimed in the beginning of the Showa Period (about 1930). These moats were changed to roads. Reclaimed rate of moat in 2000 is 76.9% in Kanazawa and are below 50.0% in Shizuoka and Nagoya. From these results, we can't mention that afflicted or not have influence on reclaimed rate of moats.

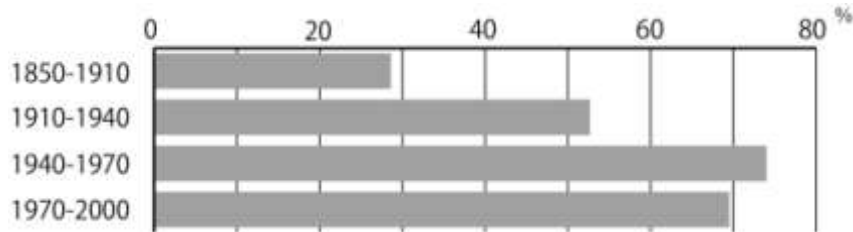


Figure 2: Reclaimed rate of moat (average of 7 cities)

### TRANSFORMATION OF LAND USE IN CASTLE DISTRICTS

In 1910 and 1940, high ratio of land use was military installation (25.7%), private land (26.1%)(figure 3). In 1970 composition of land use was changed and increasing land use were public facilities (47.3%). As a result of analyzing breakdown of public facilities from 1970 to 2000, ratio of cultural facilities is rise (31.7%) and educational facilities is fall off (figure 4). Ratio of roads is increasing steadily between 1910-2000.

The trend of land use change are different between 3 cities where main land use was military installation in 1910 (Shizuoka, Nagoya and Kanazawa, I call military installation type) and 4 cities where main land use were private lands in 1910 (Kofu, Fukui, Toyama and Tsu, I call private land type) (figure 5,6). In military installation type, main land use changes to public facilities from military installation in 1970. Many military installations were established first of all in castle districts where there were vast lands at the center of cities. Because necessary castles as military installation were kept and the others were abolished and controlled by the Ministry of Finance by "castle abolition law" in 1873. In castle districts in military installation type, many moat were not reclaimed. Military installations made use of closing character to protect military secrets. On the other hand, in private land type, main land use is private land from 1910 to 2000. There are 3/4 cities in private land type where ratios of cultural facilities are increasing from 1940-1970. From these results, castle districts are changed from closed to open.

As the result I analyze land use of the site of moats, ratio of private land was decreasing (51.4%(1910), 41.7%(1940), 20.0%(1970)) (figure 7). Conversely, ratio of public facilities was increasing (5.9%(1910), 17.4%(1940), 56.7%(1970)).

There are 6/7 cities where ratios of civic center were increasing from 1940-1970 and there are 5/6 cities among them where the ruins of castles were changed to parks. Military installations were changed to public facilities in all 3 cities of military installation type.

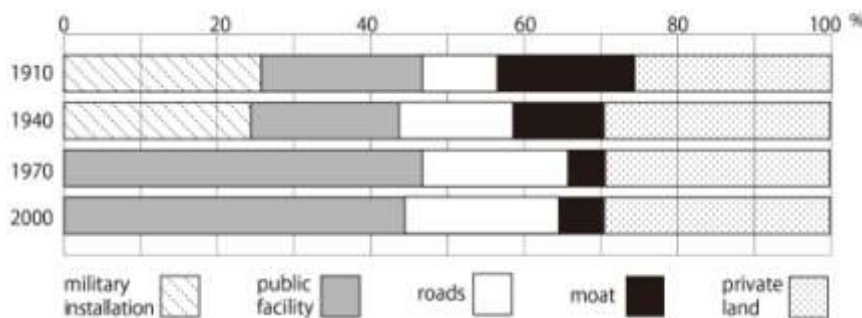


Figure 3: Land use in castle districts (average of 7 cities)

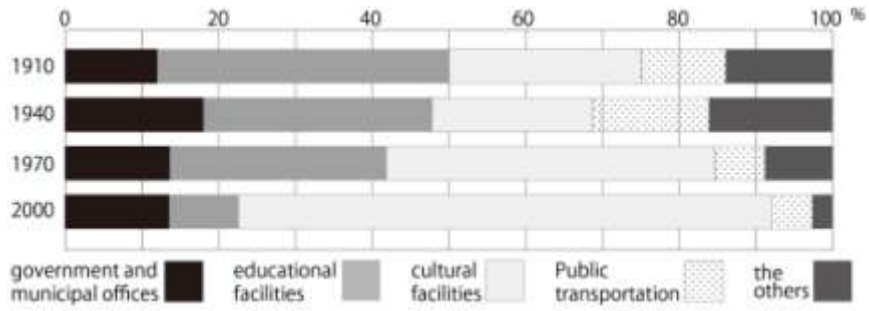


Figure 4: Breakdown of public facilities (average of 7 cities)

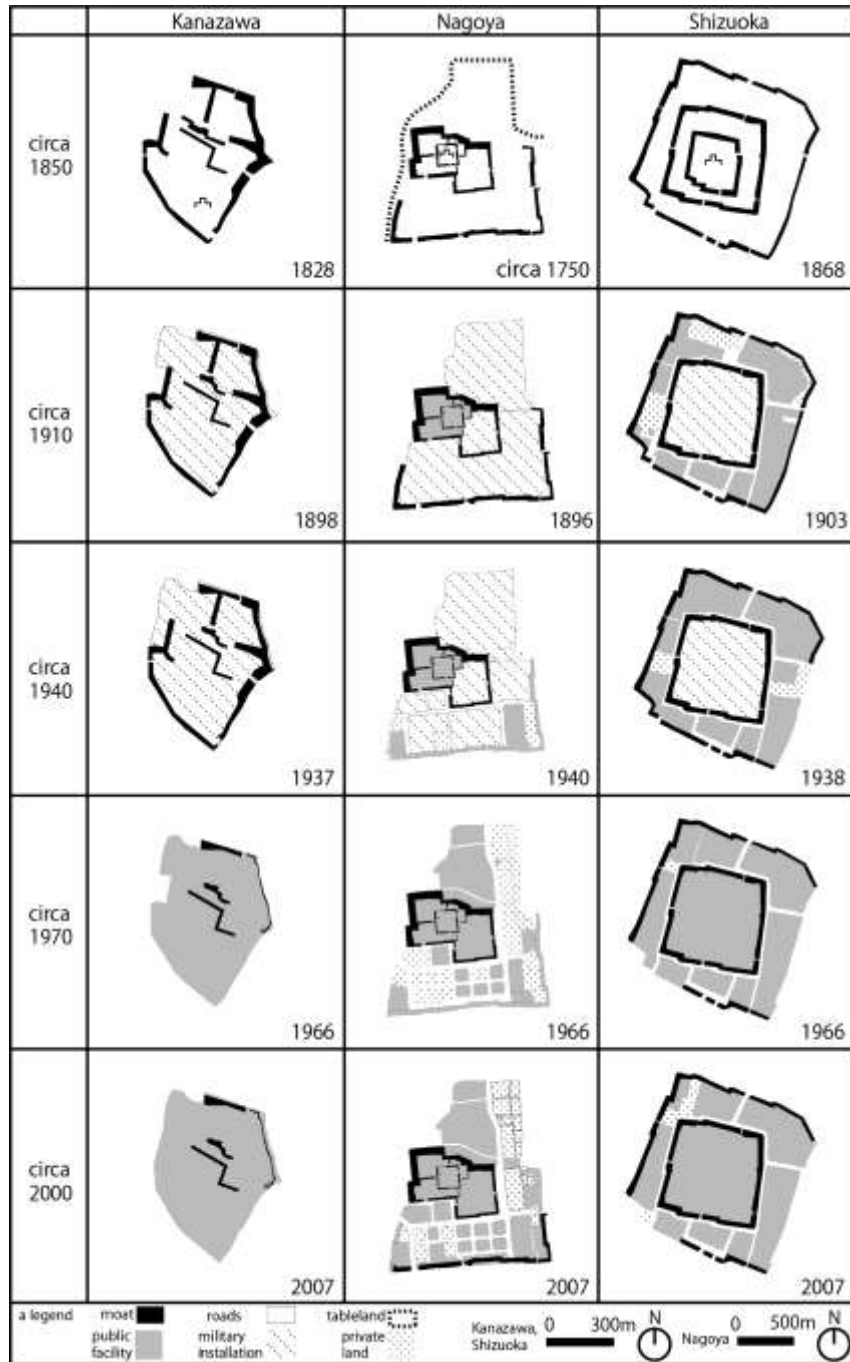


Figure 5: Transformation of land use in military installation type cities

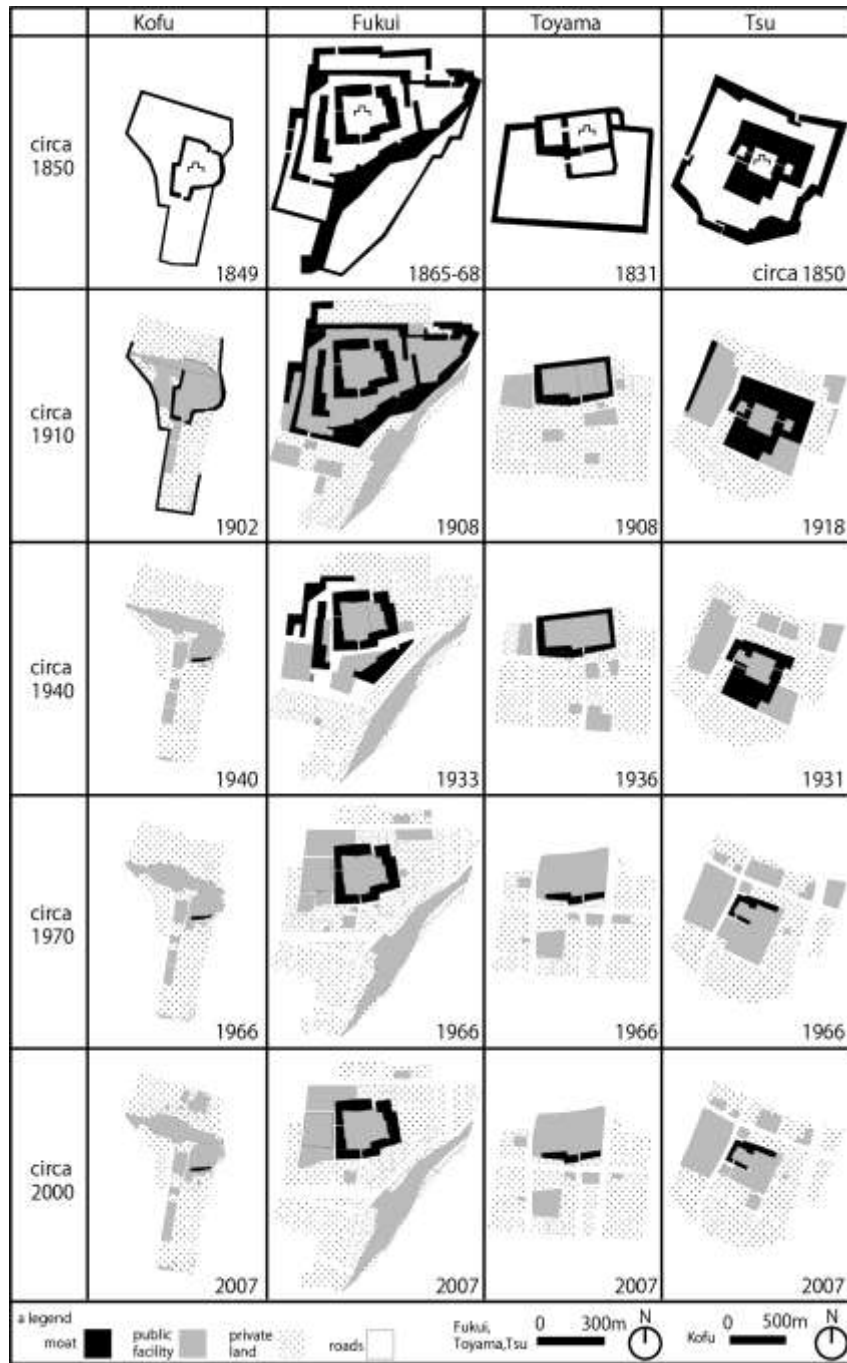


Figure 6: Transformation of land use in private land type cities

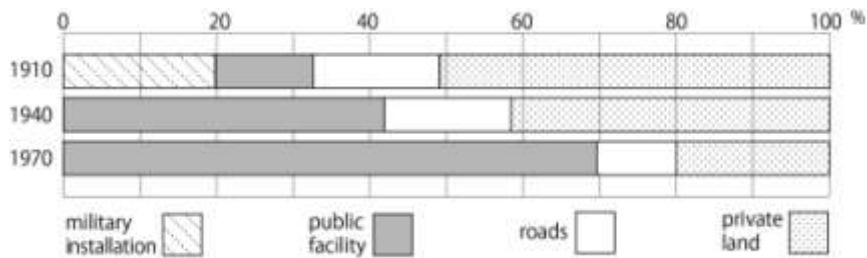


Figure 7: Land use of the site of moats (average of 7 cities)

## CONCLUSION

Findings are as follows.

First, about reclaimed rate of moat, average reclaimed rate of moat is 28.6% (1910), 52.7%(1940) ,74.0%(1970) and 69.1%(2000). At present, there are two cities (Shizuoka and Nagoya) where many moats are kept (reclaimed rate of moat is below 50.0%) and five cities (Tsu, Kanazawa, Toyama, Fukui and Kofu) where many moats are broken (reclaimed rate of moat is more than 70.0%).

Second, as a result of analyzing changes of land use, as time goes on, ratios of cultural facilities and educational facilities are higher. I mention specially that there is a great difference after that whether land use of the castle districts in 1910 is military installations or private land. That is to say, if land use of the castle districts in 1910 is military installations, reclaimed rate of moat is low and land use of the ruins of a castle is cultural facilities and educational facilities, and if land use is private land, reclaimed rate of moat is high and land use of the ruins of a castle is private land. Further more; in the cities where reclaimed rate of moat is high, civic center was formed taking advantage of constructing cultural facilities and educational facilities at 1970.

Third, as a result of analyzing area of civic center, area of civic center was expanding after World War II.

Fourth, there are two turning points from feudal space to modern space. First turning point is Meiji and Taisho era after abolition of the Han system. In Meiji and Taisho era, many moats were reclaimed, and castles were changed to military installations, public facilities and private lands. Second turning point is 1970 after World War II. After World War II, military installations were changed to public facilities such as cultural facilities and educational facilities and many moats were reclaimed.

## REFERENCES

- Yamori K. (1978) Transportation of plans of castle towns after Meiji era, "castle and castle town living modern times" (Tankosha Publishing Co., LTD)
- Yoshimura T. (1990) Study on the Changing of the Water Areas in Castle Cities, Journal of the City Planning Institute of Japan No.25
- Yoshimura T. (1991) Study on the Changing of the Water Areas in Castle Cities-Scale and Reason of the Decrease in Kuwana and Tsu City, Journal of the City Planning Institute of Japan No.2.