An empirical study on the historical evolutionary perspective of urban geometry on Edo – Tokyo Urban geometric transition in view of disaster impact from Tokugawa-Era/ Kanbun to Reiwa

TANIMOTO, Jun (Professor, Faculty of Engineering Sciences, Kyushu University) In following to our previous study that was inspired by the fine historical text; "Diary of Masakiyo Mishima, Shogun's Vassal", one certain particular urban block area, where Mishima main manor used to locate in Ishihara district, Honjo, Tokyo (Edo), is carefully explored so as to draw a historical perspective of how urban block alteration has taken place for hundreds years from Edo-Era up to now, Reiwa-era. One interesting finding is that, at the moment of Meiji Revolution, which demolished Tokugawa-House; Shogun's Government and newly established the modern government of Imperial Japan, although Mishima Family lost the ownership of the main manor, another high-class vassal sharing the same district, more precisely; one of the neighbors of Mishima, Negoro Family was able to keep the ownership of their main manor that was much larger than that of Mishima. In terms of statistical values; average site area and its standard deviation, the focal district did not significantly change until the early time of 20th century even after Meiji Revolution. Yet, Great Kanto earthquake of 1923 impacted the district to alter very much. It is because the land relocation project (LRP) after the earthquake was introduced by the central government as well as the Tokyo Metropolitan government, which put wider block roads (which was requisite form the urban planning viewpoint) and consequently divided the focal block into many smaller sites. Approximately speaking before the LRP, such average site area over the focal district was around 1000 m², whereas after the LRP it declined down to around 100 m². Therefore, we would guess that the quality, as a residential area, of the focal district was kept at a higher level until that time, since the district was originated from the residential district of Shogun's vassals; upper class people (upper class Samurai) at the time. However, impacted by great fire brought by the earthquake, triggered by the LRP, the focal district was thoroughly segmentalized. The focal district unfortunately encountered another great fire, which was brought by Great Tokyo Air Raid, took place on March 10th, 1945, which did completely burnout most of residential buildings in Honjo Ward, mainly wooden construction, and killed more than 100,000 citizens that was almost equivalent to the death toll of atomic bombing twice and Great Kanto earthquake of 1923. But, the fundamental configuration of the focal district did not change before and after WW2. In fact, the average site area over the focal district has been keeping around 100 m² from the time right after WW2 until now. To the end of such historical discussion, we successfully drew one impressive visual figure suggesting the average area of a single-site in the focal urban block as well as the standard deviation, abovementioned, for last hundreds years. Interestingly, in the two periods before and after the LRP after Great Kanto earthquake of 1923, respective average areas of a single-site do not change significantly. It might be quite unexpected when we observed the current situation of the focal district, which is featured with a quite high density of buildings, although we know our study's limitation; that is just based on one certain focal urban district suggesting one single example story.