Deterioration of Heritage by Informal Urbanization in Mekelle, Ethiopia

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Abstract
This paper aims at the analysis of degradation of heritage by informal urbanization in Mekelle, Ethiopia. Due to rapid development and population growth, Mekelle has experienced great change in recent years and is now seriously menaced by this problem. Especially in the historical area of the central district, the situation is getting ever worse. In this study, careful observation and research was carried in the central district from both architectural and social point of view to understand this mechanism.

Keywords: Ethiopia; deterioration of heritage; housing typology; informal urbanization; central district

1. Introduction
1.1 Background
Mekelle, the capital of Tigray Region in northern Ethiopia, was capital of Ethiopia in the second half of the 19th century and has kept the position of political and economical center up to this day (Fig.1.). Despite its short history, the city is renowned by the presence of a palace in the central and has an excellent tradition of masonry construction. However, due to rapid growth of population and development, the urban area, especially the central district, has changed dramatically in the last few decades. Degradation of heritages caused by informal urbanization has become so serious that careful study on the deterioration process is urgently needed.

1.2 History of Target Area
Although Mekelle is a young city within the long history of Ethiopia, it has experienced several great events, which are related to creation of unique urban characteristics. The first and most important event took place in 1872 when Emperor Yohannes IV arrived and started the construction of his palace. Aristocrats and warriors settled around the palace. Accordingly, Mekelle evolved into a city from a mere group of village. Second was the arrival of Italians in 1935, which exerted European influence such as the first master plan of the city and European style buildings. After socialist Derg (Committee) period (1974-87), in which the city suffered from stagnation, rapid growth started due to strong pressure of migration from rural areas. However, the central zone of the city has been left untouched and neglected in spite of its rich heritage.

1.3 Methodology
Following an overview survey of the central district of Mekelle, a specific study area was chosen in order to carry detailed research. This area, situated in kebele 14 and including four blocks with 121 buildings and 188 households, represents typical feature of historical Mekelle. The research process was divided into following steps:
(1) Creating a GIS map of the study area, using CAD data and cadastre plan given by the municipality.
(2) Documentation of old drawings and photos as well as genealogy of old nobles in Mekelle.
(3) Architectural survey by measurements of buildings in the study area.
(4) Abstraction of typology and reconstruction of original houses.
(5) Social survey on the residents in the study area by way of interview and questionnaire.

The author carried out architectural survey in March 2009, prior to the social survey regarding the residents' characteristic during June and July in the same year.

2. Urban Formation and Land Adjustment
2.1 Urban Formation of the Central District
Before the construction of the palace by Emperor Yohannes IV in 1872, Mekelle used to be a group of villages scattered alongside a river and slopes. Dispersed system of rural compounds was the original pattern of this area, but immigration of aristocrats and warriors promoted the formation of urban fabrics. The actual city center was thus formulated around the

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palace by the subjects of the emperor. Although the historical resource is limited, photos taken in 1930's and the Piano Regolatore\(^2\) by the Italians suggest how this zone was populated and developed. There is clear distinction between the old indigenous town, which is divided into two sectors (north-west and south-east), and the Italian new town based on rectangular system (Fig.2.). The southeast of the old town became actual kebele 14, which comprises the study area. A large number of masonry houses were constructed after 1880's and many of them still remain. The lack of demographic statistics during this period does not allow us to estimate precisely the population shift, but several reports affirm the population of around 15,000\(^3\).

2.2 Urbanization Process since 1960's

In the aerial photo taken in 1960's, the former village pattern was still recognizable in the outskirts of the urbanized zone. For instance, the oval compound situated at the angle of two axial streets shows typical hidmo (rural house) pattern with diameter of 30m (Fig.3.). Google satellite image reveals that this compound has been transformed to parcel within an urban block with a large garden. The exterior space is the remain of the old compound. This change represents the transformation process from the associated-hidmo pattern to parcel-and-block pattern, which occurred in the second half of the 20\(^{th}\) century.

2.3 Land Adjustment

Apparently old land parcels, similar to rural system, came to be adjusted to the newly established street pattern and divided into smaller lots. The hypothetical process of this land adjustment is as follows (Fig.4.): (1) Groups of large-scale residential compounds were generated surrounding the palace. Each compound stood independently but with close connection. (2) Augmentation of houses and storage buildings occurred within and between each compound, corresponding to the demographic increase. (3) Immigration and concentration in the early 20\(^{th}\) century resulted in land adjustment process within the old town, generating block-and-street type city. (4) Row house type buildings were constructed along the designated streets. Italian master planning accelerated this process. (5) At the same time, the ramification of large compounds took place due to the succession of the parcel between members, or handovers to others. (6) The process of ramification and the construction of row houses and walls created block-and-street type area.

3. Typological Analysis

Architectural survey in the study area, based on measurement of all the buildings, enabled the analysis on the housing typology in the central district. 121 buildings are distributed on 67 parcels.

3.1 Housing Type

(1) Tri-parted House Type

The most basic housing type is "tri-parted type", originating from a rural vernacular house in Tigray (Fig.5.). The central part of the house is reserved for the main room while both sides are used for sleeping and storage purposes respectively. The storage side is in general double storey or at least has a loft. A ladder is used as an access to the upper level. In the study area two houses of this type were detected, however, both have been enlarged by extension units.

(2) Lumped Tri-parted House Type

This type also originates from rural communities. Its basic plan is also tri-parted, however the exterior is different because of the lumped roof (Fig.6.). The difference from the tri-parted type is that the roof of the lower part of the house creates a terrace, which is served either by an exterior staircase or through the
tower like upper floor. In the study area there are two houses representing this type.

(3) Extended Mansion Type

Mansion Kegnazmach Mekonen Tsegay, found in the northern part of the study area, is integration of several building types (Fig.7.). Departing from lumped tri-parted house, but well combined with row house type, this building is the largest structure in the study area and is the completed type of an urban house of a noble in the dawn of the Italian invasion.

3.2 Distribution of Housing Type

In the study area the buildings constructed before 1960's compose 84% of the total number of 121. Most of them are masonry, while modern buildings built after 1960's are either concrete or chikka (mud and timber) and differ from traditional typology. The oldest type, such as tri-parted and lumped tri-parted types are situated in middle of large compounds. Those constructed after 1920's follow the alignment of the streets. The aristocrats built mansion or villa, while row houses were built for speculative purpose by landlords (Fig.8.).

3.3 Genealogy of Housing Type

The distribution of each building type in the study area enables to formulate the genealogy of housing type in Mekelle. The starting point is the rural type of tri-parted houses, both flat and lumped roofs. Masonry buildings came to be urbanized after responding to the requirement of concentration and convenience. Double storey mansions for the high rank nobles and compact size detached houses for the lower warriors came to spread within the old town. In accordance with the formation of the urban block, row house type was born to set up the alignment as well as to house the augmented population. Prior to the invasion of Italians all these types constituted parcel-and-block system city. The Occupation Government introduced European style mansions and villas as well as new building techniques. New typologies came through this Europeanization process even after the withdrawal of Italians. Moreover the local people used local building technique of masonry and, sometimes, chikka, to respond to the new requirement. Kebele 14 is a rare place where all these building types still remain, expressing the urban history of Mekelle like a living architectural museum (Fig.9.).

4. Transformation of Houses

Before the arrival of Italians, the urban area developed very slowly from population of 15,000 (1870's) to 18,000 (1920's) in 50 years. The Italian occupation in 1930's resulted in radical change for both urban planning and housing. The European type mansion and villa were transplanted in to the urban fabrics to house nobles. Immigration from rural area increased the urban population so that existing houses were subject to extensions. Careful observation on masonry details of remaining buildings enables
reconstruction of original form and later extension.

Several important buildings of early types could be reconstructed so as to grasp their transformation process. Although the iron sheet has replaced the roofing of most houses since 1960's, the original one was vernacular flat roof. Three houses are chosen as typical examples to show this process.

(1) Former Mansion Gebru G. Mikael

This house, based on tri-parted type but double storey, has been inhabited by a hereditary family, constructed by Grazmach Gebru G. Mikael, one of the highest rank nobles in Mekelle, during 1910's (Fig.10.). Ownership of the house was inherited to his daughter, with extension toward east, but since she left the country, Asmelash Gebru, her brother and the son of Grazmach Gebru, currently holds ownership. He lives in this house at present working as an office secretary. To raise income, additional buildings were built in the compound and rented to a policeman and a prostitute.

(2) Former Mansion Assefa Abay

This house is owned by the children of Blata Assefa Abay, who constructed the house in 1935 and extended in 1940 (Fig.11.). The landlord does not reside here. This house belongs to the type of modernized two-storey masonry building, with symmetrical proportion and European details. During 1960's it was again extended to the north.

(3) Former House Getahun Hailu

This detached house was proved to have been constructed in 1898 as the owner, Kiros Girmay, remembers clearly the date of construction as "two years after the Battle of Adowa". Her grandfather Balambaras Getahun Hailu was a well known hero of this battle and honored by Ras Mangasha Yohannes, the prince of Tigray at that period (Fig.12.).

The owner actually lived in the extension during 1960's, behind the main structure, which is rented to new tenants. To make her living, the owner opened a small shop within the house compound to sell miscellaneous goods. Several other buildings were also constructed.

5. Characteristics of Residents

The author has carried out field surveys on the study area in order to clarify the attributes and characteristics of the residents. 145 among 188 households responded to the questionnaire, so that the collection ratio is 84%.

5.1 Gender and Age

75% of the heads of household is female. The youngest is 18 years old (prostitute) while the eldest is 86 (owner of several properties). Two tendencies should be pointed out. Widows constitute the elder age group and the younger age group consist fatherless families. Latter was not the result of the departure of male population in search for job opportunities, but the fact that families without male members occupy this area brought about this unbalance.
Age groups vary from 10's to 80's. Half of the heads of households is rather young (20's and 30's). The presence of elder generation is comparatively conspicuous. Nearly one fourth of the heads of households is more than 50 years old. The pyramid form of whole Mekelle does not correspond to that of the study area as the number of children is rather smaller here (Fig.13.).

5.2 Occupation

The inhabitants are mainly engaged in occupation in the tertiary sector from street sellers to shop owners. The following occupations are detected through interviews: house owner (real estate business), qualified professional (NGO worker, engineer, technician, trader), public service (policeman, bus station secretary), office worker (secretary, accountant), driver, store keeper, tailor, hair dresser (barber, beauty salon owner), bar keeper (tella seller), prostitute, food seller (injera seller, vegetable seller, corn seller, etc.), waitress, construction worker (Fig.14.).

The largest occupation group is prostitutes, more than one fourth of the heads of households (27.6%). The second largest is barkeeper (14.5%). Barkeeper is synonym of tella (local beer) seller, who runs shop (bar) and provides drinking service, most of them being elderly women. Prostitution is independently allocated mainly along streets and, strangely enough, the south-west block of the study area as if it were a concentrated island of prostitution. Besides, these prostitutes occupy old traditional buildings, which are judged very important as heritage.

Third largest occupation group is house owners (11%), that is, those who possess properties and rent them. No modernized property owners, who run real estate business, could be found. Their major income comes from house rent, which is not always high.

5.3 Income

The monthly income varies from ETB 100 (injera seller) to 8,000 (engineer). Six income groups were defined by their income level and plotted on the base map (Fig.15.). The average of 145 households is ETB 765 per month, or 9,180 per year.

The study area is in the midst of a commercial zone so that there are many opportunities even for those who are not in permanent professional position. Most of the residents are working in the informal sector, backed up by the location of the site, which allow convenient transportation.

The informal sector is not only those with low income, comparatively high income people belong to this group as well, namely prostitutes. Here reside 40 prostitutes, whose monthly income varies from ETB 300 to 1,500. The average is 720, which is considered rather high among the inhabitants of Mekelle. Very high income group (8%) consists mainly of qualified professionals (engineer, technician), business people...
(trader, beauty salon owner) and real estate (house owner). Higher income group, earning more than ETB 700 monthly (49%) consists of shop owners, prostitutes, business people, professional and real estate business people, while the lower income group is made of street sellers, prostitutes (again), tella sellers. Contrary to the exterior state of deterioration, this area enjoys comparatively moderate size of income.

5.4 Tenure

The result of the survey regarding tenure (Fig.16.) show that among 145 households, 27 live in their own building (19%) while 124 live in rental housing (86%). Followed by the Proclamation of 1993, property leasehold was introduced, ensuring lease for 99 years. The land was nationalized by the socialist regime in 1975 and still in the possession of the state, and a new law guaranteed free market leasehold at the same time. Many old landowners have recovered their original right in the form of leasehold. The presence of old owners, that is, old noble families, is still apparent. Although the landownership of the old noble families was taken, these owners still maintain their right vis-à-vis the properties.

Four major noble families were seen in this study area. Two still live in their original places such as the case of Nigsti Desta descendant of Ras Haile Mariam Gugs, nephew of Emperor Yohannes IV. The parcel represents the form of the old compound, but to some reason, Nigsti’s father reconstructed a new villa type dwelling in 1940’s. It is interesting to see how the actual owners live their lives. Many do not reside in the original house. They rather prefer renting the original one, and live in a different house, or in extension. Such is the case for Nigsti. She constructed a new house along the street and moved there. In Kiros Girmay's case, the owner lives in the extension, constructed behind the original house in 1960’s, and lends the larger original house to newcomers. This "lend-away" phenomenon is the result of shrinking and deterioration process of this district.

5.5 Classification of Resident Type

Above-mentioned discussion leads to the definition of five major types of occupation groups: prostitute, bar keeper, food seller, house owner and storekeeper. Comparison of these types would explain the characteristics of the central district (table 1). Prostitute and house owner are two major groups in this area and seem to suggest the fundamental problems here.

6. Deterioration Process Since Derg Government

6.1 Impoverishment of Old Landlords

During the imperial period, Ethiopian nobles enjoyed feudal type of land ownership, both in rural and urban areas. Their mansions and villas, which are actually worth the name of national historical monuments, were generated from such fortune and, eventually, speculative housing business. The old pictures of 1930's affirm the comparatively good state of these houses built with rich stone materials and skillful masonry techniques. The confusion started in 1970's when Derg government deprived all privileges of nobles and expropriated their extra houses. Those who had been excluded from the opportunity to reside in an appropriate house were assigned each piece of the old houses under the control of kebele administration. Most of the historical houses were ramified into small pieces. Even the small House Getahun Hailu was subdivided into 3 housing units. The ex-landlords...
were obliged to choose either reaming in an extremely reduced housing unit or moving out. Since then, no one, kebele administration or residents, has taken care of the buildings since they are devoid of financial means (Fig.17.). Even the recovery of former property right in the form of leasehold did not succeed in reviving the former state of the buildings as the residents are assured for right to live there.

6.2 Ramification and Lack of Maintenance

The distribution of various types of residents represents clearly the status quo of old houses. Two cases in Kebele 14, in fact, explain how old houses are lived in: Mansion Assefa Abay and House Nigisti Desta (Fig.18.). The former is currently rented to 3 households (a male shop owner with his 3 family members, an old widow with her grandson whose mother, prostitute, died), as the landlord lives outside of this area. Since no maintenance has been under taken, the building is suffering from serious damages and decays. The latter, descendant of an imperial family, still keeps the shape of the original compound, in the center of which a villa was erected in 1940's. The landlord lives in a new wing along the street and lends other buildings, including the villa, to newcomer (9 households). The economy of the landlord does not allow her to take care other buildings besides her house.

Fig.18. Parcels of Mansion Assefa (left) and House Nigisti (right). Number Corresponds to Each Household

7. Characteristics of Central District of Mekelle

7.1 Woman-headed Household

Three fourth of the households in the study area is headed by females. The most common pattern is the result of migration of male labor force, that is, husbands working in other places and sending monthly remittance. The pattern seen in the central district of Mekelle indicates exclusively woman headed household. There are two tendencies. One is a household with a single mother without husband. Another is a household with an old lady whose spouse has already passed away. The former pattern is mainly occupied by prostitutes and tella sellers. They are the majority in this study area and run what we call "gay trade" based on their own houses. Food sellers, who are also females, belong to the same pattern. The latter type is represented by house owners, comparatively wealthy and enjoy benefits from their property and occasionally from their families or kin outside of Ethiopia. This means that two extreme types of resident coexist in the same area and, curiously enough, live without any interference to each other.

In African countries, the male-female ratio in rural areas vary because of the migration of males for job opportunity in urban areas\(^1\). Mekelle used to be like that in 1960's: 40.4:59.6\(^2\). However, actual ratio is much more balanced: 50.8:49.2. Male population is slightly higher than female. This means Mekelle is absorbing male workers from rural areas. Moreover, in the central district, ratio of female is much higher.

7.2 "Lend-away" by the House Owners

Another feature of the study area is "lend-away" by house owners. This phenomenon shows the shrinking process of the owner's family and increasing demand for income. Before Derg regime, old nobles enjoyed the possession of real estate (land and houses) in their inherited compounds. But, they are not protected by old tenure system. In spite of the return of their once owned property, its value is not as high as in Europe. Even though housing is exposed to free market policy, the rent is still low. Therefore, the owners decided to lend away the old houses in which they used to live and hand them over to tenants especially newcomers. So long as the land is still state owned, it is not possible to subdivide into several spaces, like happened in many places outside of Ethiopia. Most owners have to hand over the old property, mostly historical buildings with proper masonry construction, to collect income and move in to much more humble buildings sometimes built out of chikka.

7.3 Prostitute-in-Heritage

The "lend-away" phenomenon leads to the fact that historical buildings is occupied by the majority of the new residents, that is, prostitutes. If we call this phenomenon "prostitute-in-heritage", this is a very peculiar feature in central Mekelle. Combination of prestigious architecture and vulgar occupation evokes mismatched image of living historical monuments, in other words, the parasitism of prostitute in historical monuments, which would have attracted more tourists. Despite their historical value, mansion and houses are divided into small pieces and subject to rent in very low rent. Prostitutes are attracted by this low rent and urban business opportunities due to its convenient location in the city central.

The problem of woman-headed household does not always mean the predominance of prostitutes. The key to understand this situation might be tenure. In metropolises like Paris, Tokyo, and Los Angeles, the red-light zone is situated in a kind of abandoned district. The tenure, in other words rights have become very vague and ambiguous. Sometimes, the real estate properties are subjected double or triple leasehold. Organized crime is based within such obscure areas which no one has clear understanding of complicated tenure. Fortunately, Mekelle is too small and too naïve to be absorbed in to a vicious circle. Ownership is visualized and properties are taken care, with good and
smooth relation with their tenants no matter what their occupations are.

7.4 Forced Migrants and Poverty

More than 95,000 Ethiopians, mostly Tigrayans, are reported to have been deported from Eritrea because of Ethio-Eritrean War. These forced migrants have moved to major cities to seek job opportunities. Deprived of their properties in Eritrea, they returned to Tigray without anything. A certain number has resettled in the heart of Mekelle, including kebele 14. Their choice is limited: to work in the informal sector and sustain their lives from hand to mouth.

A report on the situation of poor district of Addis Ababa based on field survey in early 2000’s suggested that poor people in general distinguish themselves by two categories of poverty: poor and very poor. The former is the state in which people are not able to attain their basic needs, but still able to live in a house and maintain their live. The latter is the state where people are deprived of place to reside, even of food: where basis for survival is threatened completely. The emerging new slum quarters in Addis Ababa are producing these people, absorbing refugees and migrants from rural areas. Generally the job opportunity toward females is much smaller than male. But in central Mekelle, women are tough and hard workers. It may be contradictory that the quarter with prostitution in Mekelle is much wealthier than the slum quarters in Addis Ababa, but the fact that prostitutes are living in a historical quarter functions as buffer to decrease the extent of poverty. Shelters exist for newcomers where they can live for low rent.

8. Conclusion

Informal urbanization means, in general, disorderly spread and densification of built-up area without public intervention by numerous small-scale private initiatives. In short, pauperization of cities. However, the case of Mekelle is closely related with the problem of ramification and deterioration of heritages, which used to be well-designed masonry mansions, villas and houses. New buildings erected during last 50 years are comparatively poor. And even the heritages are poorly lived in. The starting point of this informal urbanization was massive immigration from rural areas and, eventually, forced migration. The survey of the central area of Mekelle has proved that this process is closely co-related to the tenure and the nature of residents. Finding the reality of unbalanced gender, age and occupation groups as well as its mechanism would certainly contribute towards future amelioration of the deteriorating urban centrals. Heritage management in such a country as Ethiopia requires this socially conscious attitude and certainly different methodology from the developed countries.

References

1) Kebele is an end administrative unit, which is equivalent of neighborhood, based on new social system created in 1975.
2) Italian Occupation Government launched Piano Regolatore (master plan) in major cities in Ethiopia. Comparison with such major cities as Addis Ababa, Gondar, or Harar, Mekelle are rather modest, probably because of its “friendly” relation between Italy by the Prince of Tigray, Ras Haileselassie Gugusa.
3) Tadesse Sequar tells the Ethiopian population during this period to about 12,000, while the report of GTZ indicates 15,000. The latter seems to have taken the description of Augustus Wylde on the agglomeration of high officials after the construction of the Palace. GTZ "The Mekelle Masterplan Design Project" Technisches Universität Braunschweig, 2006, p.51.
4) Per Carlsson, Bo Martensson, Rolf Sandstrom, Mats Astedt "Housing in Mekelle, Ethiopia", Svensk Byggstjanst, Stockholm, 1971, p.21.
5) Ibid. p.20.
6) Ibid. p.16.
7) The age group under 15 years old consists 41%, that between 15 and 49 55%, and that more than 65 years old only 3.6%.
8) 0.07ETB (Ethiopian birr) is equivalent to 1 US$ according to the rate of 2009.
9) Nigisti Desta is a descendent to Ras Hailemiaram Gugusa, nephew of Emperor Yohannes IV. Nigisti’s father took the model of colonial villa imported and developed by Italians.
10) Per Carlsson, Bo Martensson, Rolf Sandstrom, Mats Astedt op. cit., p.11.
11) Mari H. Clark "Woman-Headed Households and Poverty: Insights from Kenya", ’Woman and Poverty’ Vol 10. No 2 (Winter 1984), pp.338-354.
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