MAPS OF CAIRO AND THE DEVELOPMENT OF THE CITY AT THE END OF THE 19TH CENTURY

During the second half of the 19th Century, Egypt experienced important economic, social and political transformations. Its capital, Cairo, knew a great urban growth: 38 hectares per year were urbanized between 1868 and 1907. Several major events are landmarks for the transformation of the country. The first boom in the cotton prices and the following depression occurred in the beginning of the 1860’s; the first important loans were raised by the Khedive thereafter. In November 1869, the inauguration of the Suez Canal increased and speeded up the bankruptcy. All these factors led to the founding of the Commission for the Public Debt in 1876. In 1882, England occupied Egypt in order to tame the rebellion of a number of Egyptian officers. The reforms of the irrigation system, the distribution of land to concessionary companies and the speculations about the integration of Egypt into an African economic system (Cairo-The Cape) brought about a strong land speculation and a great boom in the building industry from the beginning of the 1890’s onwards. Cairo’s development and, to a certain extent, its rather heterogeneous pace come within this framework.

In the beginning of the 1860’s, some concessionary companies for gas and water supply set up in Cairo. After many problems when they started, these companies were to help to develop the town; however they were not directly a determining factor of urban growth. The big works of transformation of the city didn’t start before the end of the 1860’s.

On the occasion of the Paris World Exhibition in 1867, Khedive Ismail travelled in Europe. When in Paris, he was welcomed at the Hôtel de Ville by the Préfet de la Seine who presented him the works he had conducted and which were on the verge to be completed. In a strong position thanks to his new title of Khedive confirmed by an Ottoman Firman on the eve of his departure to Europe, Ismail prepared the inauguration of the Suez canal by inviting the highest European dignitaries to attend the celebration. Simultaneously, and certainly encouraged by the results of Haussmann’s works (he asked him some advice), Khedive Ismail decided to transform Cairo for this event which was planned in November 1869. Two years before that date Ismail went back to Cairo with two town planning experts, Pierre Grand, a road layout engineer, and a horticulturist who worked for more than ten years in the planting department of Paris. Following Haussmann’s advice, Pierre Grand, who was appointed director of the Administration de la Voirie, started up the survey for a new map of Cairo immediately upon his arrival. The available documents at that time dated back to 1846 and 1858 and were merely reduced and updated copies of the 1798 plan surveyed by the French Expédition d’Égypte. These maps at the scales 1:25000 and 1:18000 didn’t offer the necessary accuracy and details for the layout of drivings in the old fabric. The new map drawn by Grand at the scale 1:4000 was edited in 1874, i.e. six years after his arrival. A map edited in the beginning of 1868 shows the first transformations of the town. Far from being a general urban project, these transformations only dealt with the Azbakia花园, located on the western fringe of the old town, and those housing development in its northern part was under way. The competition between this plan and that of 1874 is striking (Pl. A & B). In 1868, Greater Cairo tathered the urban areas of Cairo, Bulaq and Old Cairo and its surface didn’t exceed 900 hectares. According to Grand’s map, 147 hectares (not including Azbakia花园) were open-up to urbanization in six years and two-third of this surface (104 ha), i.e. almost the equivalent of 11% of the previous surface of the town, were allotted and built by 1874. The urban growth that averaged 33 ha per year was all the more spectacular since the urban perimeter had remained rather the same since 1798. Although the 1868 plan is slightly different from the previous ones, especially around Azbakia花园, only about 53 ha. were urbanized during the first 70 years of the 19th Century. During this period, the population of the town increased slightly by 19000 inhabitants between 1798 and 1865. After these figures, a close examination of the 1874 map reveals that this document was a project and not the actual description of the place. Neither its title nor its legend mentioned this characteristic, however the comparison of this plan with more recent ones shows that some public spaces drawn in 1874 were never implemented. The most striking example is that of a square which, according to Grand’s map, was to be located at the south end of Mohamed Ali street, recently opened through the Old Town (Pl. C). This square was to clear the façades of Sultan Hassan’s and Rifa’i’s mosques whose
upgrandings were on-going. Its building, which would have needed the expropriation and the demolition of more than 3 ha. of old urban fabric, was in fact never realized. In the same area, the cutting of a road from Rila’i’s mosque to Tabanna street was to know the same fate. The Citadel square project which was but schematically designed in the 1874 plan proves that the details were not yet settled. The works were in fact to last until the beginning of the 1880’s. Moreover, some drivings in the Old Town, in particular several sections of Imad al-Din street, were to be completed much later (pl. D). These projects, though they only dealt with particular sections of the street network, certainly question the validity of the 1874 map. As for the urban expansion, and more precisely the buildings drawn in the new quarter, are the descriptions in the map those of buildings actually realized or are they only filling the blanks in the grid of a mere project? The history of town cartography gives several examples of project-maps; the most famous one is the so-called commission des artistes map of Paris edited at the end of the 19th Century. The Haussman-like project was rather different; in order to avoid speculation, Parisian projects used to spread only in the administrative framework necessary to their approval (public enquiries within the Hôtel de Ville and submission before the Conseil d’État). However, the Cairene cases were rather different from the Parisian ones as far as speculation and available cartographic documents are concerned. On the one hand the demand for land in the new quarter was so low that the Khedive had to grant it for free; on the other hand, the cartography edited by private publishers in Paris was abundant whereas in Cairo the only available plan before that of Grand dated from 1868 and was a mere copy of the map of 1858, whose outline was that of the plan surveyed by the French Expédition d’Égypte in 1798. The successive and more or less up-dated new editions of that plan were no longer satisfactory at a time when the city was undergoing changes and when tourism was developing at a fast pace. In relation to this, Grand’s plan filled two gaps: on the one hand, as its legend shows, it was surveyed by the Road Administration which was to use it as an outline map for new projects for more than twenty years, and, on the other hand, edited by a private publisher, it was the only detailed map offered to the public in 1874.

Grand’s map is both a site plan and a project, and as such, it presents a problem all the more important since the next one was surveyed only twenty years later, in 1896. The map shows that the town had undergone a great development and that many peripheral housing estates had been created. Thus the 1874 map is a major source to evaluate the results of the first phase of the great urbanization works carried out in Cairo. The description of the town at that time and the successive plans allow to assess its validity.

The visit of Cairo suggested in the itinerary the guests to the inauguration of the Suez Canal were offered, briefly quoted the ongoing transformations in Azbakiyya and simply mentioned: it is a new quarter whose creation was ordered by His Highness the Khedive. Then, with no other comments, the itinerary led the visitors towards the Old Town treasures. A new quarter was therefore being created. The fact that it was given no specific interest or that its visit was not even suggested might mean that the works had only just started. The following year the company for water supply intended to establish a water conveyance in the new quarter of Ismailiyya. This is the oldest mention we have concerning this new quarter which was named after its promoter. Its settlement can only correspond to an actual place which existed physically in the town. In 1872-73, official statistics mentioned the creation of more than twenty three kilometres of road network since the beginning of the works. However, although this document proves that a road layout was actually created, it doesn’t give any information concerning the human settlements in the new quarter. As a matter of fact, the existence of buildings in Ismailiyya was first mentioned in a newspaper advertisement — two beautiful houses were on sale in this quarter in 1872. The following years, travel accounts confirmed the actual building of this new quarter. If written accounts vouch for dating the urbanization of Ismailiyya at the beginning of the 1870’s, then we can question the validity of Grand’s map. Do the buildings drawn on the map correspond to those quoted in the written sources? The following plans of 1896 and 1909-1912 allow to assess the details given in the 1874 map.

The 1874 and 1896 plans show great likenesses: they are both drawn at the same scale, they offer the same level of details and
the same grid. These analogies don’t enable to verify the validity of the 1874 map insofar as they indicate that the 1896 plan might partly be a copy of the former one. The 1909-1912 map was compiled from a survey carried out by the Egyptian Survey Department. It is very different and offers much more details than the previous ones. The successive comparisons between this document – which is the only one whose originality was born out – and the older ones allow to assess their validity (Pl. E).

As far as the 1896 map is concerned, if we take into account the differences between that map and the 1874 one, and if we consider the numerous similarities between that same map and the 1909-1912 plan, we can conclude that it was also compiled from an actual survey.

By noting the similarities and differences between the 1874 plan and the following ones, we achieve two results. On the one hand, we can conclude that the buildings mentioned in 1874 weren’t drawn to fill the map but were actually completed. On the other hand, we can also assume that this new quarter underwent very few changes between 1874 and 1896.

If we compare systematically Grand’s plan to the descriptions and to the cartographic documents, we can argue that, to the exception of a few particular points, it gives an accurate description of the urban layout. Therefore 104 ha. were urbanized and occupied in six years in the Ismailiya quarter. Compared to the urban expansion in the previous period, this growth is significant. It is however a matter of horizontal development of the city and we have to adjust this conclusion by taking into account the building and landuse problems.

First, not with standing the big size of the plots, the street network occupies about 30% of the total surface. Among the 73 hectares which were actually built, 130 estates were occupied by at least one building in 1874. The density was very low, the surface occupied by the buildings in relation to the total surface of the land didn’t exceed 13%. As for the population, it can be estimated to 10 to 15 inhabitants per hectare (Pl. F). These two figures compared to the rates in the Old Town are very low and show the great morphological differences between the old and the new quarters. In 1798, the population ratio in the Old Town was about 400 inhabitants per hectare and, even though the maps don’t allow a precise evaluation, we can estimate

that the surface occupied by the buildings exceeded 3/4 of the total surface of the land. Although these facts tend to lessen the importance of the new realizations, the absolute figures show considerable changes. Despite the reusing by Grand of the main axes of Ibrahim’s plantations, the new road layout which had to be opened-up and stabilized, occupied about 30 ha. The building of the quarter located around Bab-al-Lup square and the driving of Mohamed Ali street needed the expropriation and the demolition of more than 7 ha. of old fabric. Finally, the surface used by the whole of the buildings realized in 6 years covered about 9.5 ha. that is to say, more than 15,000 m² per year. This figure, if compared to the urban growth during the first 70 years of the 19th Century, indicates a great boom. Despite their small density and their relatively low landuse, the quarters created during Ismail’s reign certainly disrupted the building and public works markets. Linant de Bellefonds’s reservations about the success of such an operation might be explained by his discontent with the competition of young French ingeneers who were entrusted with the task of carrying out one of the Khedive’s most prestigious projects. Linant de Bellefonds was then an old member of the French colony in Cairo, and as such, he used to criticize straight out the activities of his newly settled fellow countrymen, though he never referred to them namely. On the contrary, Ebers, who travelled to Egypt a few years later, couldn’t conceal his admiration for a quarter which had been built at a surprising speed.

The growth which took place in the beginning of the 1870’s is all the more striking since it was to know a great slowing down in the following years (Pi, F & G). The annual urban growth dropped from 33 to 16.3 ha between 1874 and 1891. In 1887 Ali Pacha Mubarak, who was Minister for the Public Works under Ismail, confirmed the important slakening of the urbanization in the new quarters and pointed-out, at that time, that the difficulties the government had met in encouraging the occupation of the plots located on the west side of Imad al-Din street, were far from being overcome. The slowing down of the town expansion from the mid-seventies was linked to two major events which affected the Egyptian Treasury. The establishment of the Commission of the Public Debt in 1876 forced an important recession upon the Khedive’s expenditure. His family’s palaces were built in the new quarters or nearby and, during the previous period, had attracted the settlement of a great number of high-ranking civil servants in the same area. From 1882, the British occupied Egypt and re-organized the State finance. Consequently the Khedive’s works and the budget granted to the road network projects greatly decreased.

The recovery was not to take place before the beginning of the 1890’s and, from then onwards, the urban expansion underwent an exponential growth. Between 1891 and 1896, the urbanized surface increased by 34.2 ha. per year; between 1896 and 1907, it will increase to 75.6 ha/year. The drop in the value of the sub-urban land induced in 1907 by the financial crisis which occurred in Egypt in the spring of that year, brought about a sudden break in the development of the town.

The irregularity of the growth pace of Cairo development during the last forty years of the 19th Century is a determining factor in the variation of the morphology of the urban space which were realized during the period. Grand’s plan, though it had been considered until that time a rather untrustful document since it mentions projects which were not carried out, is nevertheless an essential element which allows to precisely date the different stages of the urban development. Accordingly, in the frame of another study, it should facilitate a more precise understanding of the urban shapes promoted in the first great works of Cairo’s expansion.

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1 The total surface recently urbanized between 1868 and 1907 covers 1479 ha. (the left bank of the Nile and Roda Island not included). This figure doesn’t exactly correspond to the differences between the surface of the town in 1907 and in 1868 (1485 ha) since, on the one hand, Azbakiyya was urbanized again between 1868 and 1874 (24.4 ha) and, on the other hand, the Qasr-al-Nil and Qasr-al-Aini palaces were both located inside the town in 1907 though there land was not really urbanized (30.4 ha). These figures were calculated by the author from successive plans of Cairo (see Table 1).
2 The Cairo Company for Water Supply was settled in 1865. As for the conveyance network, it was not working before the end of 1872. The concessionary company C. Lebon for gas supply also settled in 1865. In 1868, only 365 street lamps are working. Société anonyme des eaux, 1873, p. 4; Levernay, 1868, p. 176.
3 A. Sammarco, 1937, p. 165.
4 His name was Barrillet Deschamp. E. Haussmann, 1979, p. 128.
Haussmann dedicates the first chapter of his memoirs to the Paris plan. He shows the necessity to survey a detailed map before starting any drivings in the old fabric. E. Haussmann, 1879, "Le plan de Paris", vol. 1, pp. 1-18. CLOT Bey streets are cut between 1869 and 1872. It presents an inflexion in order to avoid the demolition of one of the most important Coptic church. This fact clearly proves that, at that time, the engineers already had a detailed and triangulated map. F. Gallini, s.d., p. 23.

Baur, Shultz, 1846; "Plan de la ville et de ses environs", 1858.

Jacotin, 1809.

P. Grand Bey, 1874.

Plan de la ville du Caire, 1868. Published by F. Levernay, 1868.

Figures calculated by the author (see Table 1).

The Cairo population increased from 263,000 inhab. in 1796 to 283,000 inhab. in 1865 A. Raymond, 1977, p. 214.

According to Fromentin, the gathering of Rumaliyya square and Garamaydan was engaged as early as 1869 and in three years later. Linant de Bellefonds indicates that new houses border this square. However the carrying away of the earth by the Ministry of Public Works in July 1862 shows that the works were not yet completed at that time. Furthermore, according to the successive maps of Cairo and the present state of the square, the border of the south-east corner was never completed. E. Fromentin, 1835, p. 143; Linant de Bellefonds, 1872-1873, p. 11.

Around 1910 for its Northern section. Cairo, 1909-1912, sheets 36-H/37-H.


The big number of maps published by Émile de la Bédolière in his book about the history of Paris, gives an idea of how maps of Paris were spread in the second half of the 19th Century. E. de la Bédolière, 1860.

Plan de la ville du Caire, 1868; Plan de la ville et de ses environs, 1858; Jacotin, 1809.

The records department of the Egyptian Survey has many copies of Grand's map which were used as skeleton maps by the Tanoum Service.

"Ebner & Cie, libraires, éditeurs au Caire".

Plan général, 1896.

Itinéraire des invités, 1869, p. 7.

Société anonyme des eaux du Caire, 1887, p. 27.

E. de Régny, 1872, p. 76.

Office des ventes, 1872, p. 3.

C. des Perrières, 1873, pp. 53-54.

Plan général, 1896; Cairo, 1909-1912.

The survey of this map is born out by the successive reports published by the Egyptian Survey. It was first mentioned in 1910. A list of maps, 1910, p. 24 and pl. XII.

The 1896 map has proved not to be a copy of the 1874 map as far as the buildings and the road layout are concerned. However this is not the case for the gardens. The similarities between the two maps concerning the drawing of the gardens located in private plots and the lack of details in the 1896 map concerning the gardens which didn't exist in 1874, show that for the gardens only the 1896 map is a copy of the previous one.

Figures calculated by the author from the 1874 map. Because of the big size of the blocks, which needed to be divided by secondary streets later, this figure indicates that an important part of the land is dedicated to public spaces. P. Grand Bey, 1874.

Figures calculated by the author. The buildings of each plot were estimated to about 650 m². Three palaces occupy about 10,000 m², building land covers 72.8 ha (104 × 70%). The total surface of the buildings (94,500 m²), i.e. (130 × 650 + 10,000) occupies 12.98% of the building land. The population was estimated by taking into account 8 to 12 dwellers per estate.


Grand re-uses more than 5,000 m² of the alleys of Ibrahim's plantings in this project. J.-L. Arnaud, 1991, p. 53.

Figures calculated by the author. Driving of Mohamed Ali street: 38,400 m²; Bab al-Lup: 35,000 m².

According to Linant de Bellefonds: "Quoique l'on ait donné gratis le terrain à bâtir, il s'élève fort peu de constructions et de loin en loin". Linant de Bellefonds, 1872-1873, p. 601.

G. Ebers, 1881, p. 33.


Manuscript map of Levelling Bench marks, 1874, Record Department of the Egyptian Survey (without reference number); H. Aladenize, 1874.

At the end of 1862, the maps surveyed for the alignment control only cover 15 kilometres of the street network (more than 20 km were created between 1868 and 1874) and most of them are out-of-date. Ministère des Travaux publics, 1883, p. 70.

R. Owen, in his analysis of the building market in Cairo confirms this trend. He shows that a strong growth occurred at the end of the 19th Century and the beginning of the 20th Century. R. Owen, 1969.

P. Arminjon, 1907, p. 215.

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