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**Telling of a city’s invisible past through georeferenced historical documents and web map technology.**

*Keywords*: Thessaloniki, Exohes, Rue des Campagnes, Hamidye Quarter, web map Thessaloniki

**Summary**: The subject of the work presented here is to map a part of urban history concerning a newer quarter within the city of Thessaloniki, Greece (that of the Exohōn district, formed at the end of the 19th and the beginning of the 20th century) as recorded in a number of notable buildings of the area which were constructed during that period and shaped the quarter’s appearance and cosmopolitan character. Cartographic heritage supported by digital technologies in combination with other documents of cultural heritage can help reveal fragments of the city’s stories and depict them on a modern map. This becomes particularly useful, given the lack of historical proper cadastral records for the area. To be more specific, a large number of historical buildings of the above mentioned quarter, most of them non-existing nowadays (and documented elsewhere through urban history researchers) are geographically located, georeferenced and digitized, with the help of historical documents (i.e. historical maps, topographic plans from various years during the period of concern as well as old air-photos). This is a part of the city’s history that -although recent- has not been recorded to the detail that it deserves, from the geospatial and cartographic point of view. Given the fast changes in its urban evolution and character, it constitutes an attractive area of knowledge, both for specialists and for the general public. For the final cartographic presentation of the data processed in the work, a web mapping environment is chosen, for its multimedia possibilities suitable for presenting additional information at request (photos, text, documents), but also for its potential appeal to the general public.

**Introduction**

Although very old (actually ancient), Thessaloniki is a city that will not very easily “talk about its past”. This is particularly evident for its recent past, i.e. that of the last one-and-a half century. There are reasons for this, the most important being the turbulent changes that took place in the course of history during that time and the social and economic circumstances promoted by these changes, both in the city but also in the entire country. The urban history of the new parts of the city that were created during the last quarter of the 19th century and until the first decades of the 20th is the subject of interest here, from the cartographic heritage point of view and the support that digital technologies in combination with cultural heritage can offer, in order to help reveal fragments of the city’s stories on a map. This is a part of the city’s history that although recent has not been recorded to the detail that it deserves, at least not from the geospatial point of view. Given the fast changes in its urban evolution and character, it constitutes an attractive area of knowledge, both for specialists and for the general public.

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Thessaloniki, since its foundation in the 4th century B.C. and until the last quarter of the 19th century was always spatially restricted within its walls. It was not until the end of the 19th century (i.e. twenty-two centuries later) that the city started to expand outside its initial core. The newly built areas started to extend southwards, along the coast, in an area initially built as a suburb, with spacious houses, summer villas, gardens and orchards. This area, known popularly by the name “Exohes” (meaning countryside in Greek) but also by its French name as Le Quartier des Campagnes, was mainly inhabited by the wealthy of Thessaloniki (i.e bankers, government officials, industrialists, merchants from all ethnic groups of the city: Jews, Greeks and Ottomans). It was an area quickly built but only for short enjoyed by its inhabitants: after WWII and especially during the 1960s and the 1970s, most of its beautiful buildings were demolished.

Recent studies and exhibitions reveal this charming area’s past and during the last years research on the matter, by urban historians and architects, has increased. Since the geospatial nature of the subject is self-evident and since no current maps for showing the results of this research have appeared so far, the cartographic documentation and depiction of the subject is of obvious interest, hence the work presented here, which also demonstrates the potential of the geo-heritage component of the issue.

The purpose of the work is to use all the available information in order to put on the map -with as much accuracy as possible- all the historical buildings of the area that have been documented (especially those which are demolished). For the final cartographic presentation of the data processed, a web mapping environment is chosen, for its multimedia possibilities but also for its potential for disseminating information on the theme to the general public.

**The area of interest: The Exohes Quarter (Le Quartier des Campagnes)**

During the last quarter of the 19th century and the first decade of the 20th Thessaloniki, still under Ottoman rule, is following the trend of westernization that prevails in the Ottoman Empire. The city undergoes administrative and spatial changes in this context, starting with the demolition of the sea walls (from 1869 to 1872), followed by the demolition of a large part of the SE walls in 1889 (Fig. 1). Parts of the old coastline are embanked and new land parcels are created and sold in high prices. A new city plan is made in the same year (1889); it will be followed by additional ones (in 1906, which is finished in 1909-10 and a later one in 1919) to support the rapidly expanding urban environment. Two new quarters are created outside the walls, one to the NW and another to the SSE (Fig.1 right); the former (Cayir) is related to the development of industry in the area and the presence of the railway station and the harbour nearby, the latter (Hamidiye, named after the Sultan Abdul Hamid) aims at the development of a new residential area based on modern standards and appealing to a new wealthy upper- & middle-class (Kolonas, 2014). The SSE area is connected with the rest of the city via a new tram-line in 1892. The urbanization is growing, especially after the fire of 1890 in the old part of the city. In a map from 1898-99, the new area is depicted in detail in multiple map sheets in scale 1:500, where the streets, the borders of the blocks, the buildings, the gardens and the orchards are shown in detail, in aquarelle colours of rare beauty (Fig. 4c).

In 1906 a new urban plan is issued, which extends the new quarter; it is finalized in 1909-10. The area is unusually large but this is done on purpose, to provide for anticipated future development but
Figure 1. Only at the end of the 19th century and after the demolition of a large part of its walls the city of Thessaloniki starts to expand (source: Koussoulakou et al, 2017).

Figure 2. The approximate extend of the city during the first decades of the 20th century and until WWII. The area of interest -Exohes, in the SSE part along the littoral- is enclosed within the dotted rectangle (source: op. cit.).

Figure 3. Post-war to present expansion of Thessaloniki (source: op. cit.).
possibly the land speculation is also a reason for the area’s extended borders (Kolonas, op. cit.). In 1911 a special governmental decree defines these borders (see Fig. 2 and Fig. 4a).

The inhabitants of the new quarter belong to the upper class of the city, are wealthy and often hold important positions (Ottoman officers, the mayor, consuls, bankers, industrialists, merchants, foreign diplomats, scientists, higher governmental officials etc.).

In the meanwhile, Thessaloniki becomes part of the Greek State (in October 1912). Many of the buildings are then abandoned by the Turkish owners, due to the population exchange between Greece and Turkey. A number of these are then used as public or residential buildings for officials of the Greek state or the royal family. During the First World War, when Thessaloniki was centre of operations many buildings served as luxury hotels, military headquarters, hospitals or officers’ residences. After the great fire of 1917 the area is rapidly built, since many inhabitants move from the destroyed part of the centre to the new quarter, which is now known by its Greek name as The Quarter of “Exohes” or by its French one Le Quartier des Campagnes, both literally meaning the same thing. The quarter is regarded as the “new city” by that time; it is of the same extend as the old city and actually the only area of Thessaloniki that has developed according to an urban plan (op. cit.)

After WWII the near extermination of the Jewish community of Thessaloniki (only 5% survived) was one more reason for a number of houses in the area to gradually fall apart, change use or ownership, remain uninhabited or be demolished. After the war and especially in the 1960s and 1970s a massive rebuilding takes place and the city expands further (Fig. 3); as a result only few of the old buildings escape demolition.

The quarter of nowadays hardly reminds of its past; only rare and fragmental appearances of old houses, almost hidden by the surrounding high flat buildings, recall of what once was. Most of the houses that have survived until nowadays were the ones that became state property in the course of time, since only state services could afford their high prices; the rest were demolished, following the option given to house owners by the Greek law, according to which the owners could demolish old property in exchange for newly built flats.

As already mentioned, the interest and research about the area has revived and increased recently, with various studies published (see e.g. Demetriades, 1983; Gerolympou, 2013; Kolonas, 2014) and also exhibitions organized. Such an exhibition, held a couple of years ago, has actually been the motivation for this work. Organized by the Cultural Foundation of the Greek National Bank, it was based on the book by Kolonas (2014), who has conducted and extensive research in various archives and compiled valuable information concerning approximately two-hundred buildings of the area, both existing and (most of them) demolished.

To show the results of such a research cartographically is a task in itself; since the visitors of the abovementioned exhibition were provided with a photocopy of a map in small scale (Fig. 6) which included about half of the number of the buildings researched, it was considered worthwhile to attempt the cartographic display of the subject. This task was carried out in the framework of a Diploma Thesis at CartoGeoLab, in the Faculty of Engineering, Aristotle University of Thessaloniki. For the final cartographic presentation of the results, the web version of a map was chosen for its multimedia possibilities which allow the user to explore additional information for every single object (i.e. its history through text, photos and other documents); it would not have been possible to include all this information on buildings on a paper map, given also the distribution and the areal extend of
the data; a web map could also be useful for disseminating more efficiently the subject to the general public.

Figure 4. a) The extend of the new quarter (Hamidiye / Exohes / Quartier des Campagnes), as shown on the city development plans of 1909-10 (in red) and of 1919 (in white); (source: Gerolymbou, 2013). b) The new quarter to the SSE of the old city, as depicted on a 1916 map (source: Demetriades, 1983); compare with Fig. 2 above.

Figure 4. c): A total number of sixty-nine map sheets in large scale (1:500) covering the Exohes Quarter for the 1898-1899 mapping project (source: National Map Library & Thessaloniki Municipality, 2005)
Figure 5 above gives an impression of the dramatic changes that the area has undergone, which are mostly characterized by the excessive and dense construction of flats’ buildings, typical of Greek cities and towns from the 1950s and onwards; often these were built after demolishing older houses existing in each plot. This practice has resulted in the destruction of a great number of old buildings (not only in Thessaloniki, but throughout the country). This was particularly evident in our area of concern, given its past development and level of housing and its current dense rebuilding, land use change and activities.

The images in Fig. 5 are an eloquent visualization of the changes, by means of two spots in the Exohōn district, shown in their past and present condition: on the left as they looked in the late 19th - early 20th century and on the right in their respective current state (as captured by Google Earth). A large number of the old buildings in the area has been documented in photos, various kinds of (sparse) historical archives and studies; nevertheless an organized geographic “record” in the form of a map, where all these constructions are located as accurately as possible in geographic space was not available, hence our motive to proceed with this goal.
Cartographic heritage- and other historical documents about the area used for data processing

The starting point for our work was the map photocopy shown in Fig. 6. This copy and the detailed information about the buildings of the area as recorded in Kolonas (2014) was the information we had from the city historians’ side, in order to precisely locate all the buildings during the period of interest (1885 till the late 1920s and early 1930s, with even some later constructions) and to create the web map.

Figure 6. Poster of the 2016 exhibition on The Exohes Quarter of Thessaloniki (top-right) and the small-scale map handed to the visitors, which triggered this work.

Figure 7. The exhibition map (fragment) and its counterpart from a 1944 original, used for the purposes of this work.
Figure 8. a) The 1944 map georeferenced and the 81 points of the exhibition map geolocated. b) The large scale topographic plans of the Municipality georeferenced in the area, in order to refine the location and trace the outline of each building.
Figure 9. Left: an example of a large-scale Municipality historical topographic plan. Right: Almost one-hundred historical topographic plans were georeferenced to allow for the exact digitization of the outlines of (existing and demolished) buildings.

Figure 10. Left: The orthophoto used (scale 1:5000, compiled from 1938 photos). Right: The orthophoto helped identify the buildings or cross-check their position (cyan: existing buildings, magenta: demolished buildings).

We identified the original map on which the photocopy was based (see Fig. 7); the original was a British map of 1944 (in scale 1:10000) -we worked on a digital copy of this map that was provided by the Hellenic Archive of Cartographic Heritage in order to locate the 81 point locations, as a first approximation, for a start (Fig. 8a).

The next step was to seek large scale maps of the area that could possibly contain as many as possible of the buildings to be traced. Unfortunately large-scale maps with this information available for the area hardly exist. At this point it should be mentioned that there is a lack of cadastral records
(historical or current) for the city (as it is for most of Greece -with the exception of very few areas in the country), since the national cadastre is currently a project still under development. The detailed large-scale sheets of the 1898-99 map shown in Figure 4c (National Map Library & Thessaloniki Municipality, 2005) record the situation at a very early stage of the neighbourhood, so they could be of limited use only. The large scale topographical plans issued at various times for purposes of arranging and implementing legal acts concerning property in the city, seemed to provide a suitable means for our case (Fig. 9Left). The Thessaloniki Municipality geo-portal (URL1) provided various plans for the whole area at different years covering the period of interest; these were spotted, downloaded and georeferenced. A total of almost one hundred topo-plans (in scale 1:500 and occasionally 1:200) were georeferenced and in combination with detailed information from the written sources they helped refine the locations, identify the outlines of the buildings in question and finally digitize them (Fig. 9Right).

At the same time we made use of an historical ortho-photo of the area in large scale (1:5000), dating back to 1938 (Fig. 10Left). The orthophoto was useful first of all because in 1938 all of the buildings in question still existed and could be seen on it; also it was a valuable source when information was not available on topographic plans or for areas that topo-plans were not available at all; thirdly it constituted a very useful tool for cross-checking and verifying the location and the outline of buildings traced on topo-plans and for giving a continuous view of the past for the area examined (Fig. 10Right).

**Web mapping**

The creation of a data base with all the information concerning the buildings which were digitized was the next step. The GIS environment of the software package *ArcGIS* was used for this task. This info had then to be converted for web mapping: the geographic items were converted to the suitable coordinate reference system (WGS84) and then the GIS shapefiles to .geojson format, as required for the web output of geographic features. Consequently the files were transferred to a web mapping platform (MapBox) used for the initial formulation of the map. Additional code (in javascript) was written in a next step, in order to provide more features which were not readily available in the web mapping platform, such as feeding the thematic info to the new format of the geo-data, creation of popups with images, creation of map layout elements etc.

In Figure 11 to Figure 14 some snapshots of the web map are shown and described. The buildings (almost two-hundred in total, with only 40% of them still existing) are superimposed as exactly as possible on the modern base-map, offering a glimpse to the past and to information concerning their history, through textual descriptions and photos that the user can invoke by panning, zooming and clicking on the map.

By gathering, organizing and displaying the info in a spatially structured way on a digital multimedia web map it is easier to correlate the past with the modern space of everyday urban life and thus, to appreciate the history of the city in a more tangible way. Furthermore, from a practical point of view, the map provides a suitable platform for feeding and displaying additional information, whenever available, through future research in the history of the city.
Figure 11. The web map for the area of concern.

Figure 12. A popup window appears on the map when clicking on each building, with: Identification name, construction year, brief history, address, state archives’ documentation (when available) and photo. Red: demolished buildings, Blue: existing buildings. Colour-shade variation indicates period of construction.
Figure 13. Old photos depicting the area as it was, popup when clicking on camera symbols placed on selected locations on the map.

Figure 14. Another clickable view of the past facing NNW, from the beginning of the Exohes Quarter borders, towards the old city.
Aknowledgements

We would like to express our appreciation to Prof. P. Patias, Director of the Laboratory of Photogrammetry and Remote Sensing, Aristotle University of Thessaloniki, for his keen response to provide the digital copy of the 1938 orthophoto. The provision of the 1944 map (digital copy with user permission) by the Hellenic Archive of Cartographic Heritage and the collector is also much appreciated.

References


URL1: https://gis.thessaloniki.gr/ (Thessaloniki Municipality geo-portal)