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Sub/semi-Subterranean Complexes in Byzantine Beer Sheva, Negev, Israel, Date, Use and Typology

By Davida Eisenberg-Degen[*], *Daniel Varga*[±] *& Tal Sapir*[•]

Byzantine Beer Sheva presents a phenomenon of digging, lining, building, and making extensive use of sub/semi subterranean complexes. We note on the relationship between these sub/semi subterranean complex and the 'aboveground' structure and details such as the construction of the stairway, the delimitation of the earthen section formed, the installations exposed in the complexes and the form of roofing. The installations and ceramic assemblages point towards the fact that these complexes were more than simple storage facilities and were in daily use. The earliest Byzantine sub/semi subterranean complex dates to the second half of the fifth century and sixth century though the majority of sub/semi subterranean complexes, built on the outskirts of Byzantine Beer Sheva date slightly later in the sixth century and seem to have been excavated following the outbreak of the Bubonic plague which swept through the Negev in the mid sixth century CE.

Introduction

Loess started to deposit in the Beer-Sheva basin at the northern perimeter of the Negev Desert towards the end of the Pleistocene era continuing into the Holocene era. The loess which currently reaches several meters in thickness is characterized by limestone deposits. It is difficult to dig into, but once a cavity is created, the earthen loess walls remain compact and do not crumble or collapse. The loess slows percolation of rainwater, helps maintain a steady temperature and moisture level within the excavated cavity and reduces the risk of pests. Subterranean spaces offer protection from the elements including dust storms which occur often in the early spring, summer and autumn.[1] In addition, the Subterranean complexes offer an activity/storage area that is hidden from the eye and from potential hostile forces. It is perhaps these advantages, amongst others, that encouraged man to dig into and make the loess a comfortable storage, activity and likely, a living space.

The first to create and use anthropogenic cavities in the loess of the Beer-Sheva basin date to the Chalcolithic culture. In the Chalcolithic period excavated

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1. A. Kushelevsky, G. Shani, and A. Haccoun, "Effect of Meteorologic Conditions on Total Suspended Particulate (TSP) Levels and Elemental Concentration of Aerosols in a Semi-Arid Zone (Beer-Sheva, Israel)," *Tellus B: Chemical and Physical Meteorology* 35, no. 1 (1983): 55-64.

cavities took on several shapes including rounded depressions, and cylinder and bell shaped deep shafts - some of which are connected by tunnels. These may have served for dwelling, storage, defence, and/or burial.[2] Few examples from the Beer-Sheva area suggest that some use was made of sub/semi-subterranean depressions and rooms during the Late Persian,[3] Hellenistic,[4] and Roman periods.[5] It is only in the Byzantine period that the phenomena reemerged with magnitude.

The sub/semi-subterranean complexes discussed below are not dissimilar in concept to the natural and enhanced cavities and caves of the southern Hebron hills and Judean lowlands which were in extensive use throughout the Byzantine – Mamluk periods (and in some cases sporadically through present day). These caves, cut into the hard limestone hillside included built entrances, a division into areas and were often surrounded by a walled courtyard and were an integral part of a larger complex. The main difference between the natural or hewn caves and the sub/semi-subterranean complexes dug into the loess is on the one hand technical and on the other hand, and perhaps directly related to the first, the relatively limited period within the Byzantine period that sub/semi-subterranean complexes were in use. The short period that sub/semi-subterranean complexes were in use may also reflect the state of economy and security in the region at the time.

Beer-Sheva is situated in the northern Negev, in a semi-arid desert. In the Byzantine period Beer Sheva was an important administrative, religious and military center. It is mentioned in a number of historical texts and epigraphic sources. The two main historical sources are the *Notitia Dignitatum*, a Roman imperial document dated to the beginning of the fourth century CE, corresponding to reign of Emperor Diocletian (284-305 CE) and the "Beer Sheva Edicts". The *Notitia Dignitatum* states that a cavalry unit from the province of Dalmatia was stationed in Beer-Sheva (*Equites Dalmatae Illirian*). The Edicts lists the three provinces of Palestine (Prima, Secunda and Tertia) and the sums of money that residents had to pay the army, emphasizing the centrality of Beer Sheva in the Byzantine military system.

Recent archeological excavations and research revealed archeological remains which enable us to better reconstruct Byzantine Beer-Sheva. Byzantine Beer-Sheva is constructed on loess soil plains and low limestone hills. The Byzantine

2. Y. Abadi-Reiss, "Dug in Loess – New Perspectives for Understanding Underground Spaces in the Chalcolithic Period of the Northern Negev," in *Archaeological Excavations and Research Studies in Southern Israel* (eds.) A. Golani, D. Varga, G. Lehmann, and Y. Tchekhanovets (Collected Papers, 17th Annual Southern Conference. Volume 4, 2021), 133-152.

3. Sapir personal observation.

4. Y. Baumgarten, "Be'er Sheva', Railway Line," *Hadashot Arkheologiyot - Excavations and Surveys in Israel* 132 (2020).

5. Varga personal observation.

city included a cathedral,[6] churches, monasteries, bath houses, and a military camp.[7] Surrounding the municipal center were wealthy residential quarters. Diverse industrial installations and agricultural complexes[8] were constructed along the outskirts of the city. The Byzantine city is surrounded by cemeteries of stone lined cist tombs.[9] The farmsteads and agricultural installations are usually found beyond the cemeteries delineating the Byzantine city (Figure 1). The city flourished through the seventh century though there is evidence that by the Umayyad period some of the Byzantine structures stood abandoned.[10] In the Abbasid period new farmsteads were constructed around Beer-Sheva. These integrated architectural elements dismantled from Byzantine structures, likely from Byzantine Beer-Sheva.[11]

A number sub/semi-subterranean complexes exposed hint a wide phenomenon. From a dozen examples we may conclude that these complexes were usually excavated into the loess soil though there are a few examples of quarrying into the limestone bed rock, following the same techniques and forms. How the sub/semi-subterranean complexes correspond and were integrated within the 'traditional' stone built Byzantine city is not entirely clear. This is mostly due to the poor state of conservation. Most sub/semi-subterranean complexes are part of the agricultural farmsteads surrounding the city. Stairs lead down from within the courtyard though at a number of sites no remains of the "aboveground" structure were found. Few of the exposed complexes are situated closer to the Byzantine administrative center.[12]

6. P. Fabian, P., and Y. Ustinova, A Monumental Church in Beersheba: Architecture, Mosaics and Inscriptions," *Israel Exploration Journal* 70, no. 2(2020): 221-245.

7. Y. Gil'ad, and P. Fabian, "7,000 Years of Settlement: The Archaeological Remains in Be'er Sheva' from the Sixth Millennium BCE until the End of the First Millennium CE," in *Be'er Sheva' an Evolving Metropolis: Selected Articles* (eds.) Y. Gradus and E. Meir-Glitzenstein, 303-331 (Be'er Sheva, 2008).

8. D. Varga, and S. Talis, "Byzantine Archaeological Remains in Beer Sheva, Israel," *Athens Journal of History* 7, no. 3 (2021): 203-216.

9. Abadi-Reiss, and D. Eisenberg-Degen. "Be'er Sheva', Balfour Street," *Hadashot Arkheologiyot - Excavations and Surveys in Israel* 125 (2013).

10. Varga and Talis, "Byzantine Archaeological Remains in Beer Sheva, Israel,"2021.

11. D. Eisenberg-Degen, "Nahal Be'er Sheva'," *Hadashot Arkheologiyot - Excavations and Surveys in Israel* 129 (2017).

12. Y. Israely, "Be'er Sheva'," *Hadashot Arkheologiyot - Excavations and Surveys in Israel* 17 (1966): 3-4; A. Fantalkin, "A Salvage Excavation at a 6th-7th Century C.E. Site on Palmach Street, Beersheba," *Tel Aviv* 27, no. 2 (2000): 257-272.

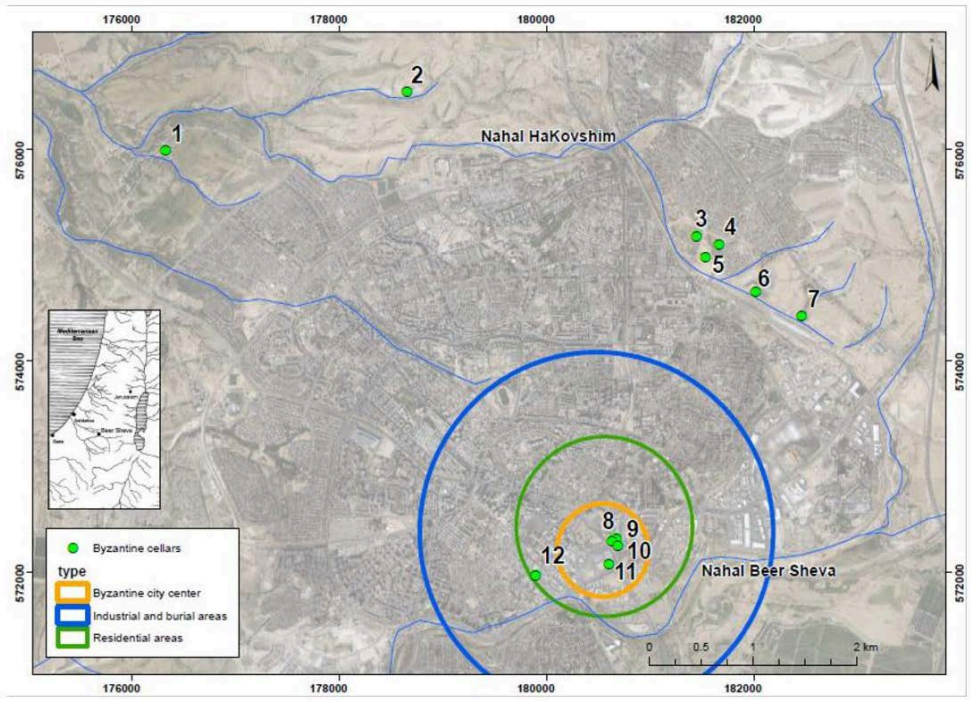

Figure 1. *Distribution of Sub/Semi Subterranean Complexes in and Around Byzantine Beer Sheva*
Source: prepared by Emil Aladjem, IAA.

Structural Characteristics of Sub/Semi-Subterranean Complexes

The existence of sub/semi-subterranean complexes in Byzantine Beer-Sheva was first noted in the 1960's. These were mostly encountered during monitoring the excavation of deep trenches made for laying sewage pipes, foundation pits and other construction related work. The first and most complete sub/semi subterranean complex was excavated in 2011[13] after which several more sub/semi subterranean complexes were recognized and excavated in and around Byzantine Beer-Sheva[14] (Figure 1). Examining a dozen complexes it is evident that each is slightly different, they may be relatively simple consisting of single space to a network of interconnected rooms. Few complexes present a clear connection to an

13. Varga and V. Nikolsky, "Be'er Sheva'(Central Bus Station)," *Hadashot Arkheologiyot - Excavations and Surveys in Israel* 125 (2013).

14. Eisenberg-Degen, "The Phenomeon of Underground Cellars During the Sixth Century CE in the Be'er Sheva Valley – Excavations in the 'Northern Campus' Site as a Test Case," in *Archaeological Excavations and Research Studies in Southern Israel* (eds.) A. Golani, D. Varga, G. Lehmann, and Y. Tchekhanovets (Collected Papers, 17th Annual Southern Conference. Volume 4, 2021), 153-171.

"aboveground" structure. This is largely due to the poor preservation of the ancient remains.

The Byzantine sub/semi-subterranean forms, constructional styles, and elements such as the entrance into the complex, the treatment of the earthen walls and the form of roofing, help us better understand and define them. At present a dozen sub/semi-subterranean complexes recognized in archaeological excavations have been published. In some cases the complex was only partially excavated, or in a bad state of preservation, in other instances the excavation report does not relate to details that in retrospect seem to be of importance. Following we list some of the most pronounced characteristics noted in relation to the Beer-Sheva Byzantine sub/semi-subterranean complexes. Piecing this data together we are able to better understand the Byzantine sub/semi subterranean phenomena.

"Aboveground" structure – roughly half of the subterranean complexes clearly related to an 'aboveground' structure. In several cases the "aboveground" structure was removed or destroyed as the modern city of Beer Sheva developed, and prior to the identification of the sub/semi-subterranean complex, which at times occurred only a decade later. In these cases, it is clear that an "aboveground" structure existed, though the exact relationship between the two is missing. The "aboveground" structure could take on several forms, such as a relatively simple single roomed structure and yard[15] a farmstead[16] or a large villa[17].

Stairway construction – in all but one documented case the descent into the sub/semi-subterranean complex was by way of a built stone staircase. The staircase built either of dressed stone or unworked field stones is set between two descending stone walls which delimited the earth section. A few examples present a staircase which, after a number of stairs, turned creating an angle, other staircases were straight leading from the upper surface level to the sub/semi-subterranean one. A single example presents access by a sloped earthen and mudbrick ramp, set between two stone walls[18] (Figure 2).

15. Eisenberg-Degen and A. Levi-Hevroni, "Be'er Sheva', Naḥal Kovshim and Naḥal 'Ashan," *Hadashot Arkheologiyot - Excavations and Surveys in Israel* 132 (2020).

16. Eisenberg-Degen, "Be'er Sheva', Ben-Gurion University," *Hadashot Arkheologiyot - Excavations and Surveys in Israel* 130 (2018).

17. S. Talis, "Be'er Sheva'," *Hadashot Arkheologiyot - Excavations and Surveys in Israel* 127 (2015).

18. Eisenberg-Degen, D. "Be'er Sheva', Nahal 'Ashan (Newe Menahem B): Remains from the Byzantine and the Ottoman *Periods." Hadashot Arkheologiyot - Excavations and Surveys in Israel* 130 (2018).

Figure 2. *Semi Subterranean Complex Neve Menachem*
Source: photo by Davida Eisenberg-Degen, IAA.

Stairway placement – the stairway is set external to the "aboveground" structure, leading from a (usually walled) courtyard down to the sub/semi-subterranean complex. It seems that the sub/semi-subterranean excavators intentionally avoided digging below the "aboveground" structure so as not to increase the chance of collapse.

Number, shape and size of rooms – the sub/semi-subterranean complex may be composed of a single space with small enclaves for installations to a complex system consisting of a courtyard or a foyer which connected to a series of additional rooms (Figure 3). It seems that most courtyards/foyers led to three additional rooms though other floorplans exist. The courtyard, foyer and rooms tend to be of a rounded or elliptical shape. When the room is of a more rectangular shape, the "corners" tend to remain rounded. Exceptions are seen when the sub/semi-subterranean complex is hewn into bedrock rather than dug into loess, and then the rooms may be rectangular.[19] The fact that sub/semi-subterranean plans present these differences, suggests that specific premeditated adaptations were made to the plan according to the geological setting; loess versus limestone bedrock, rounded rooms verse rectangular ones. The size of subterranean rooms does not exceed three meters to prevent the earthen ceiling from collapsing. Large spaces were open to the sky or were roofed with perishable materials.

19. Fantalkin, "A Salvage Excavation at a 6th-7th Century C.E. Site on Palmach Street, Beersheba," 2000; Varga and Nikolsky, "Be'er Sheva'(Central Bus Station)," 2013.

Figure 3. *Subterranean Complex, Northern Campus*
Source: photo by Emil Aladjem, IAA.

Treatment of the earth sections and the construction of walls – with excavating and creating a sub/semi-subterranean cavity an earthen section is formed. The earthen section was treated in several forms; it could be covered with a simple layer of mud-plaster or with a layer of ceramic sherds, small fieldstones, or plaster. In some cases, walls of dressed stone or unworked field stones delimited the earthen section. Stone walls were also constructed within the sub/ semi-subterranean complexes, usually to separate rooms and form entrance ways. These had an additional role in supporting the ceiling.

Floor levels, thresholds and doorways – the sub/semi-subterranean complexes are not level but rather have between a step to five stairs leading between rooms. Semi-subterranean courtyards are of a higher elevation than the rooms around them (Figure 4). When the subterranean complex has a foyer, it may be lower than the other rooms. Floors consisted of beaten earth and in a single case an inner courtyard was paved. The entrance into sub/semi-subterranean complexes and the movement between rooms was through well-built entrances (Figure 5). The upper part of the entrance may have a straight lintel or may be arched, these are 1.6-1.8 meters in height.

Figure 4. *Semi Subterranean Complexes, Central Bus Station*
Source: photo by Skyview commissioned by the IAA.

Figure 5. *Entrance into Subterranean Room, Central Bus Station*
Source: photo by Asaf Peretz, IAA.

Installations – a wide range of installations have been documented in sub/ semi-subterranean complexes (Figure 6). These include tabuns, silos, stone basins and mortars, grinding stones, oil presses and stone platforms which seem to have served as bases for other installations such as "Pompeiian" grinding stones.

Figure 6. *Cooking Installations, Northern Campus*
Source: photo by Davida Eisenberg-Degen, IAA.

Roofing and air shafts – All of the excavated sub/semi-subterranean complexes were found filled with loess soil. The soil may have originated from the ceiling and roof of the complex, though may also have come from adjacent areas which collapsed into the cavity. Some fill layers include ceramic and glass sherds, ash layers and other finds which seem to have originated from the upper, on ground-level activity area. Built entrances and stone walls reinforce the notion that the ceilings consisted of natural earthen layers and that the rooms were excavated from the side, leaving a thick earth layer as a celling. As several subterranean complexes included cooking installations, we suggest the existence of air shafts, to help ventilate the underground rooms and serve as chimneys for the "kitchen" area (Figure 7). Air shafts were noted at a single excavation.[20]

20. Varga, personal observation.

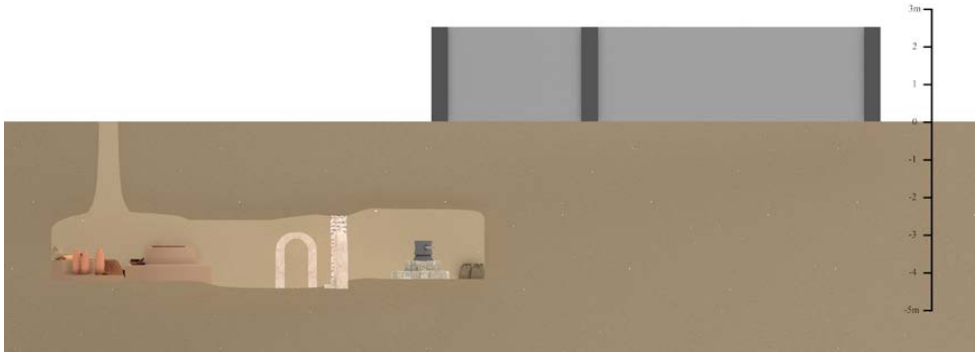

Figure 7. *Reconstruction of the Northern Campus Subterranean Complex, Section with Cooking Installations Air Shaft, Built Entrance and Room with Agricultural Installation*
Source: model by Sahaf Shaked.

Courtyards and perhaps some of the other spaces were either left unroofed or were roofed with perishable materials.

Based on the characteristics listed above, we propose three types of sub/semi-subterranean complexes:

A. A sub/semi-subterranean complex in which a staircase connects between a courtyard on the topsoil level to the semi-subterranean courtyard which was roofed with perishable materials. The semi-subterranean central courtyard housed an agricultural related installation for manufacturing or storage. Descending stairs led from this central semi-subterranean courtyard to additional, separate, subterranean rooms (Figure 4).
B. A subterranean complex, in which a staircase leads from a courtyard on the topsoil level to a foyer. The foyer leads to a number of additional rooms which are either on the same floor level or are slightly higher. Most rooms housed installations (Figures 3 and 6).
C. A semi-subterranean complex, in which the entrance could be by way of stairway or ramp, which led to a large space with small side enclaves (Figure 2). The central room and enclaves served to house installations. The space would be either open to the sky or roofed with perishable materials.

At present the three types do not seem to be chronologically defined and likely coexisted.

Use of Beer-Sheva's Byzantine Sub/Semi-Subterranean Complexes, and Their Desertion

There are several considerations that may bring to underground dwelling. Thick earthen walls and ceiling help maintain relatively constant and mild conditions. The depth of the underground complex reduces the presence of pests. These advantages may have been intentional and related to the use and purpose of the subterranean complex such as a storage area for grain and fermented foods. Other reasons for subterranean complexes may be related to extreme climate conditions and frequent sandstorms, lack of building materials or limited funds, the need to leave land for cultivation, or due to security reasons. It is tempting to recognize the sub/semi-subterranean complexes as cellars.[21] In some aspects they did serve as cellars; the optimal conditions of subterranean complexes made them ideal for long term storage. But the existence of agricultural production installations indicates that the complexes were multi-functional spaces.

Ethnographic parallels indicate that sub/semi-subterranean complexes may replace above ground dwelling and then will include all aspects of a house with sleeping courters, cooking installations, and storage.[22] In other cases, sub/semi-subterranean complexes found directly below structures or set at some distance serve as root cellars,[23] "summer kitchens" or "bake houses". These may be used on a regular basis or will be in use only when needed such as according to the number of people to feed, the number of ovens within the central kitchen, the preparation of specific foods (with strong or unpleasant smells), or to maintain stature and the separation of classes.[24]

The ceramic assemblages from the Beer-Sheva's Byzantine sub/semi-subterranean complexes include oil lamps, tableware, cooking vessels, and storage jars. The storage jars are almost all, of the bag shaped type. Caches of juglets were found in two subterranean complexes, both from sites situated closer to the Byzantine city center.[25] From these finds, the industrial installations and cooking installations, it is evident that the complexes were in daily (and at times nightly) use and were not solely storage facilities.

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21. G. S. Golany, *Earth-Sheltered Habitat History, Architecture and Urban Design* (New York, 1983).

22. Ibid; Golany, *Earth-Sheltered Dwellings in Tunisia Ancient Lessons for Modern Design* (New Jersey, 1988); Golany, *Chinese Earth-Sheltered Dwellings – Indigenous Lessons for Modern Design* (Honolulu, 1992).

23. E. A. Chappell, "Acculturation in the Shenandoah Valley: Rhenish Houses of the Massanutten," *Settlement Proceedings of the American Philosophical Society* 124, no. 1 (1980): 55-89.

24. Ibid; A. Maguire and A. Gomme, "Who Needs Two Kitchens?: and Who Parleyed in the Winter Parlor?" *Architectural History* 38 (1995): 58-68.

25. Fantalkin, "A Salvage Excavation at a 6th-7th Century C.E. Site on Palmach Street, Beersheba," 2000; Varga and Nikolsky, "Be'er Sheva'(Central Bus Station)," 2013.

The ceramic assemblage from the "Central Bus Station" excavation situated close to the Byzantine administration center, includes vessel forms dated to the second half of the fifth and sixth century CE. A hundred and thirty coins recovered were minted over several years, the earliest dating to the Late Roman period. The latest coin in the assemblage dates to 527 CE, the beginning of Justinian's reign. It is unclear when the "Central Bus Station" complexes went out of use though the ceramic assemblage and lack of coins postdating the mid sixth century CE, point towards their complete abandonment by the Early Islamic period. The ceramic assemblages from the sub/semi-subterranean complexes excavated outside of Byzantine Beer-Sheva date to the sixth century. At present the ceramic finds from a single subterranean complex suggest that it was in use through the early 7th century CE. There is no evidence to support the use of sub/semi-subterranean complexes in the Abbasid period suggesting that the complexes were deserted by then. Sub/semi-subterranean complexes were in existence prior to the mid sixth century crisis, especially on the outskirts of the Byzantine administrative center. These went hand in hand with the founding of new farmsteads through the duration of the sixth century CE.

In several of the sub/semi-subterranean complexes thin layers of dried mud covered the earthen floors. These are the byproduct of flooding events. It seems that flooding was the primary reason that sub/semi-subterranean complexes went out of use. In a number of cases constructional adjustments were made to keep the complex in use and in running order. These included raising floor levels and adjusting the stairs. Nonetheless it seems that the main reason of the abandonment of the sub/semi-subterranean complexes is flooding and the eventual collapse of the earthen ceiling layer. It is difficult to reconstruct the thickness of the subterranean complexes' loess ceiling, especially after the topsoil went through several changes with the development of modern Beer-Sheva. We estimate the ceilings to be roughly two meters thick. Anthropological parallels point towards loess ceilings 3.5-15 meters thick. The stability of the ceiling increases with its thickness,[26] therefore a two-meter-thick ceiling would not have been very stable. The abandonment of the sub/semi-subterranean complex did not necessarily mean that the entire site was deserted and often the "aboveground" structure continued to function. Perhaps the best example comes from the "Gev Yam" excavation, after the sub/semi-subterranean complex went out of use the stairway leading to the subterranean complex was paved over and the farmstead continued to function.

26. Golany, *Earth-Sheltered Habitat History, Architecture and Urban Design*, 1983.

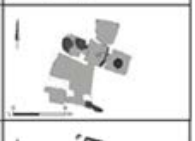
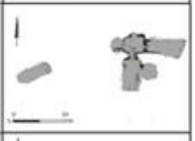
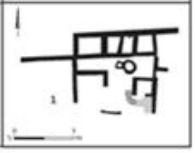
No. on map	Excavation name	Permit no.	Complex type	Relation to 'Aboveground' structure	Treatment of earth sections	Roofing/Ceiling	Installations	Reference	Plan
1	Nahal 'Ashan Area C	A-7026/2014	C	Segmented remains of farmstead	Mud-plaster	None or perishable	Pompeii grinding stone, installation related to oil production, tabun	Eisenberg-Degen 2018b.	
2	Nahal Kovshim and Nahal 'Ashan Area L	A-8306/2018	B	Entrance from external courtyard of small farmstead	Mud-plaster	Loess	Stone basin	Eisenberg-Degen and Levi-Hevroni 2020.	
3	Ben Gurion University, Area B	A-8090/2016	B	Farmstead (removed prior to excavation)	Mud-plaster, ceramic sherds, stone walls	Loess and perishable materials	Stone platform, tabuns,	Eisenberg-Degen 2018a	
4	Ben Gurion University, Area A Collapsed sub-terranean complex recognized, not excavated	A-7756/2016				Loess		Varga 2018	
5	Ben Gurion University	A-8980/2020	A	Farmstead (removed prior to excavation)	Plaster, mud-plaster, ceramic sherds	Loess and perishable materials	Stone basin, stone platform (adjacent to the section)	IAA archive	
6	Gev Yam	A-5896/2010	B	Entrance from inner-courtyard of farmstead		Loess		IAA archive	

Figure 8. *Byzantine Semi Subterranean Complexes in and Around Byzantine Beer-Sheva*
Source: graphics by Sahaf Shaked and Ilanit Azulay.

Discussion

In the mid sixth century CE Negev there is clear evidence of change. In the desert towns - urban disfunction and the collapse of municipal function took place as is reflected through the stop of organized trash collection. In addition, discontinuity in trash build up is dated to the mid sixth century CE suggesting a gradual abandonment by then.[27]

The sixth century was a time of turmoil in the Byzantine Empire. The year – year and a half of the "Dark Cloud" (536-537 CE), followed by a decade of the Bubonic plague (starting roughly in 541-2 in the Negev) resulted in abatement of the agricultural industry. It is unclear to what degree the year of the "Dark Cloud" affected the Negev but in more north-western lands the dimmed sun and

27. G. Bar-Oz, L. Weissbrod, T. Erickson-Gini, Y. Tepper, D. Malkinson, M. Benzaquen, et al. "Ancient Trash Mounds Unravel Urban Collapse a Century Before the End of Byzantine Hegemony in the Southern Levant," *Proceedings of the National Academy of Sciences* 116, no. 17 (2019), 8239-8248.

cool weather brought on a year of drought and food shortage which resulted in an economic decline, movement of populations, and political unrest.[28] The bubonic plague spread through the land affecting both humans and animals, followed by large numbers of casualties. The diminishing lower class greatly reduced the available work force directly affecting the economy.[29] Fields were left un-reaped and vineyards were not harvested. Wheat was not stored and grapes were not processed, the produce was not transported to the markets and famine spread. Labor wages increased, encouraging higher degrees of mobility and the abandonment of highly populated areas.[30] Another hypothesis suggests that the slow decline and collapse of the eastern Byzantine Empire affected the international markets which the Negev vine growing communities were dependent on, bringing hardship and eventually the desertion of the region.[31]

It is impossible to pinpoint the desertion of the region to one specific cause nor assume that it accorded in a single event. By the mid-sixth century CE the Negev settlements' population diminished, few of the fields were cultivated and the major city markets could not answer the demand. Taxes were not reduced and became an even larger burden on the existing population,[32] perhaps pushing the remaining people also, to move on. Archaeological studies in Scythopolis (Bet Shean) show that the building and renewal of the city, which was in full steam, came to a halt after 541 CE. A similar picture arises from archaeological excavations in northern Syria.[33] Following the patterns noted in Syria, churches continued to be erected and renovated in Byzantine Beer-Sheva through the seventh century CE.[34]

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28. A. Arjava, The Mystery Cloud of 536 CE in the Mediterranean Sources," *Dumbarton Oaks Papers* 59 (2005): 73-94.

29. M. Morony, "For Whom does the Writer Write? The First Bubonic Plague Pandemic According to Syriac Sources," in *Plague and the End of Antiquity: The Pandemic of 541-750* (ed.) L. K. Little, 59-86 (Cambridge: Cambridge University Press, 2007).

30. Ibid.

31. Bar-Oz, Weissbrod, Erickson-Gini, Tepper, Malkinson, Benzaquen, et al. "Ancient Trash Mounds Unravel Urban Collapse a Century Before the End of Byzantine Hegemony in the Southern Levant," 2019; Y. Tepper, T. F. Erickson-Gini, Y. Farhi, and G. Bar-Oz, "Probing the Byzantine/Early Islamic Transition in the Negev: The Renewed Shivta Excavations, 2015-2016," *Tel Aviv* 45 (2018): 120-152.

32. P. Sarris, "Bubonic Plague in Byzantium: The Evidence of Non-Literary Sources," in *Plague and the End of Antiquity: The Pandemic of 541-750* (ed.) L. K. Little, 119-134 (Cambridge: Cambridge University Press, 2007).

33. H. N. Kennedy, "Justinianic Plague in Syria, and the Archaeological Evidence," in *Plague and the End of Antiquity: The Pandemic of 541-750* (ed.) L. K. Little, 57-98 (Cambridge: Cambridge University Press, 2007).

34. Fabian and Ustinova, "A Monumental Church in Beersheba: Architecture, Mosaics and Inscriptions," 2020.

Conclusions

Based on the sub/semi-subterranean complexes exposed and the historic, economic state of the region we tentatively suggest that the large number of farmsteads built throughout the second half of the sixth century CE is due to the gradual desertion of the Negev Highland settlements, possibly related to drastic effects of the bubonic plague. The sub/semi subterranean complexes were not a novelty in the region but do seem to have gained popularity and went through several adaptations. These may be related to rising need for security. Interestingly a silo was exposed in each of the "Central Bus Station" complexes. This is in contrast to farms surrounding the Byzantine city center where few silos were exposed, none within the sub/semi subterranean complexes. This fact may be related to the administrative organization which was perhaps based on central storage facilities.

Bibliography

Abadi-Reiss, Y. "Dug in Loess – New Perspectives for Understanding Underground Spaces in the Chalcolithic Period of the Northern Negev." In *Archaeological Excavations and Research Studies in Southern Israel*, edited by A. Golani, D. Varga, G. Lehmann, a0d Y. Tchekhanovets. Collected Papers, 17th Annual Southern Conference. Volume 4, 2021, 133-152 (in Hebrew).

Abadi-Reiss, Y., and D. Eisenberg-Degen. "Be'er Sheva', Balfour Street." *Hadashot Arkheologiyot - Excavations and Surveys in Israel* 125 (2013).

Arjava, A. "The Mystery Cloud of 536 CE in the Mediterranean Sources." *Dumbarton Oaks Papers* 59 (2005): 73-94.

Bar-Oz, G., L. Weissbrod, T. Erickson-Gini, Y. Tepper, D. Malkinson, M. Benzaquen, et al. "Ancient Trash Mounds Unravel Urban Collapse a Century Before the End of Byzantine Hegemony in the Southern Levant." *Proceedings of the National Academy of Sciences* 116, no. 17 (2019), 8239-8248.

Baumgarten, Y. "Be'er Sheva', Railway Line." *Hadashot Arkheologiyot - Excavations and Surveys in Israel* 132 (2020).

Chappell, E. A. "Acculturation in the Shenandoah Valley: Rhenish Houses of the Massanutten." *Settlement Proceedings of the American Philosophical Society* 124, no. 1 (1980): 55-89.

Eisenberg-Degen, D. "Nahal Be'er Sheva'." *Hadashot Arkheologiyot - Excavations and Surveys in Israel* 129 (2017).

____. "Be'er Sheva', Ben-Gurion University." *Hadashot Arkheologiyot - Excavations and Surveys in Israel* 130 (2018).

____. "Be'er Sheva', Nahal 'Ashan (Newe Menahem B): Remains from the Byzantine and the Ottoman *Periods." Hadashot Arkheologiyot - Excavations and Surveys in Israel* 130 (2018).

____. "The Phenomeon of Underground Cellars During the Sixth Century CE in the Be'er Sheva Valley – Excavations in the 'Northern Campus' Site as a Test Case." In *Archaeological Excavations and Research Studies in Southern Israel*, edited by A. Golani,

D. Varga, G. Lehmann, and Y. Tchekhanovets. Collected Papers, 17th Annual Southern Conference. Volume 4, 2021, 153-171 (in Hebrew).

Eisenberg-Degen, D., and A. Levi-Hevroni. "Be'er Sheva', Naḥal Kovshim and Naḥal 'Ashan." *Hadashot Arkheologiyot - Excavations and Surveys in Israel* 132 (2020).

Fabian, P., and Y. Ustinova. "A Monumental Church in Beersheba: Architecture, Mosaics and Inscriptions." *Israel Exploration Journal* 70, no. 2 (2020): 221-245.

Fantalkin, A. "A Salvage Excavation at a 6th-7th Century C.E. Site on Palmach Street, Beersheba." *Tel Aviv* 27, no. 2 (2000): 257-272.

Gil'ad, Y., and P. Fabian. "7,000 Years of Settlement: The Archaeological Remains in Be'er Sheva' from the Sixth Millennium BCE until the End of the First Millennium CE." In *Be'er Sheva' an Evolving Metropolis: Selected Articles*, edited by Y. Gradus and E. Meir-Glitzenstein, 303-331. Be'er Sheva, 2008 (in Hebrew).

Golany, G. S. *Earth-Sheltered Habitat History, Architecture and Urban Design.* New York, 1983.

____. *Earth-Sheltered Dwellings in Tunisia Ancient Lessons for Modern Design*. New Jersey, 1988.

____. *Chinese Earth-Sheltered Dwellings – Indigenous Lessons for Modern Design*. Honolulu, 1992.

Israely, Y. "Be'er Sheva'." *Hadashot Arkheologiyot - Excavations and Surveys in Israel* 17 (1966): 3-4.

Kennedy, H. N. "Justinianic Plague in Syria, and the Archaeological Evidence." In *Plague and the End of Antiquity: The Pandemic of 541-750*, edited by L. K. Little, 57-98. Cambridge: Cambridge University Press, 2007.

Kushelevsky, A., G. Shani, and A. Haccoun. "Effect of Meteorologic Conditions on Total Suspended Particulate (TSP) Levels and Elemental Concentration of Aerosols in a Semi-Arid Zone (Beer-Sheva, Israel)." *Tellus B: Chemical and Physical Meteorology* 35, no. 1 (1983): 55-64.

Maguire, A., and A. Gomme. "Who Needs Two Kitchens?: and Who Parleyed in the Winter Parlor?" *Architectural History* 38 (1995): 58-68.

Morony, M. "For Whom does the Writer Write? The First Bubonic Plague Pandemic According to Syriac Sources." In *Plague and the End of Antiquity: The Pandemic of 541-750*, edited by L. K. Little, 59-86. Cambridge: Cambridge University Press, 2007.

Sarris, P. "Bubonic Plague in Byzantium: The Evidence of Non-Literary Sources." In *Plague and the End of Antiquity: The Pandemic of 541-750,* edited by L. K. Little, 119-134. Cambridge: Cambridge University Press, 2007.

Talis, S. "Be'er Sheva'." *Hadashot Arkheologiyot - Excavations and Surveys in Israel* 127 (2015).

Tepper, Y., T. F. Erickson-Gini, Y. Farhi, and G. Bar-Oz. "Probing the Byzantine/Early Islamic Transition in the Negev: The Renewed Shivta Excavations, 2015-2016." *Tel Aviv* 45 (2018) :120-152.

Varga, D. and V. Nikolsky. "Be'er Sheva'(Central Bus Station)." *Hadashot Arkheologiyot - Excavations and Surveys in Israel* 125 (2013).

Varga, D. and S. Talis. "Byzantine Archaeological Remains in Beer Sheva, Israel." *Athens Journal of History* 7, no. 3 (2021): 203-216.

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Between Greeks and Latins: Pilies Street in Medieval Vilnius

By Irma Kaplūnaitė [*]

Pilies Street is one of the oldest in the city of Vilnius, the capital of the Grand Duchy of Lithuania. The street's name is connected with its starting point, the territory of the castles of the grand dukes. In the early 15th century, Vilnius City Hall was erected at the south end of Pilies Street. Pilies Street is not only an inseparable part of the city's earliest spatial structure, but is also directly connected with the Christian communities of Vilnius, when it was still a pagan city. During the earliest period of the city's development Christian immigrants, both Orthodox and Catholic, gathered around Pilies Street. The paradox is that very little information is available about the emergence and formation of the central street of the city. The purpose of this paper is to examine more carefully the early history of what is perhaps the main street in Vilnius and the changes over the course of time. This becomes possible after combining archaeological material with the sparse information from written sources, and also after making use of data from the investigation of the historical natural environment.

Introduction

Pilies (Castle) Street (Figure 1, red line) is one of the oldest arteries in the city of Vilnius, the capital of Lithuania. The street's name is connected with its starting point, the territory of the medieval castles of the grand duke of Lithuania (Figure 1: 1). From there the road led south towards other important duchy centres and beyond towards the lands of Poland and Ruthenia. In the early 15th century, Vilnius City Hall, which is still performing its functions to this day, was erected at the south end of Pilies Street (Figure 1: 2). Rotušės Square (or City Hall square) acted as the oldest known city marketplace.[1] In the 16th century two gates of the city's defensive wall: Medininkai or Aušra (Figure 1: 3) and Rūdininkai (Figure 1: 4), were built to the south of City Hall. From at least the 16th century, a suitable name for Pilies Street has been the Royal Road or via regia.[2] The envoys of various countries as well as processions used to enter and leave the city via this road. Pilies Street was the most opulent in the city as it was lined by palaces, high society homes, and merchants' guilds. In addition, it was precisely this street that served as a boundary between the separate territories inhabited by the communities in the city of Vilnius.

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1. For more, see Irma Kaplūnaitė and Rytis Jonaitis, "Numizmatiniai ir sfragistiniai radiniai iš Rotušės aikštės," *Numizmatika* 6 (2009): 79-88.

2. For ex. Antanas Rimvydas Čaplinskas, *Vilniaus gatvių istorija. Pilies gatvė. Antra knyga. Didžioji gatvė* (Vilnius: Charibdė, 2002), 9.

The name for Pilies Street has changed more than once. Previously the entire segment from the castle territory in the north to the City Hall in the south bore this name. Other names were also used for the entire street or different parts of it.[3] This street is currently divided into two separate streets: Pilies (north part) and Didžioji (south part). For the sake of clarity in this article the general name of Pilies Street is used. The entire street bore this name already in 1636.[4] South of the City Hall building it splits into two branches, present-day Aušros Vartų and Rūdninkų Streets, which led in the Middle Ages to Medininkai and Rūdninkai, i.e., to two other important centres of the Grand Duchy of Lithuania.

Pilies Street is not only an inseparable part of the city's earliest spatial structure, but is also directly connected with the Christian communities of Vilnius when it was still a pagan city. A multi-religious nature is in general one of the features characteristic of the city of Vilnius. Although until the 1387 official Catholic baptism Lithuanians (at least the majority) were pagans, Christian immigrants, both Orthodox and Catholic, had settled in Vilnius from the last third of the 13th century.[5] The coexistence of the different communities left traces in the history of Vilnius. During the earliest period of the city's development the communities gathered around Pilies Street. In this way the Orthodox Christian residents of Vilnius settled on it east side, creating a separate suburb, which was called the Civitas Ruthenica or Ruthenian City.[6] On the west and southwest side of the street a Catholic suburb, the German City, formed.[7] The local pagans settled in the north (closest to the royal castle) and south parts of the street. After the 1387 official Catholic baptism the former pagans moved to the west part of the street. This division of the urban space lasted a long time, and memories of this division of communities into Greek and Latin rites were recorded in written

3. For ex. Pilies Didžioji Street (Vladas Drėma, *Dingęs Vilnius* (Vilnius: Vaga, 1991), 168-195), Didžioji, Plačioji, Turgaus, etc. (Čaplinskas, *Vilniaus gatvių istorija*, 81). Sometimes the street is divided into Upper and Lower Castle Street (cf. David Frick, *Kith, Kin and Neighbors. Communities and Confessions in Seventeenth-century Wilno* (London: Cornell University Press, 2013), 22-26.

4. Mindaugas Paknys, *Vilniaus miestas ir miestiečiai 1636 m.: namai, gyventojai, svečiai,* (Vilnius: Vilniaus dailės akademijos leidykla, 2006), 20-22.

5. For more about the settlement of Christians in pagan Vilnius, see Darius Baronas and Stephen C. Rowell, *The Conversion of Lithuania. From Pagan Barbarians to Late Medieval Christians* (Vilnius: The Institute of Lithuanian Literature and Folklore, 2015); Rytis Jonaitis and Irma Kaplūnaitė, "Panašūs ar skirtingi? Dvi krikščioniškos bendruomenės pagoniškame Vilniuje", *Acta Historica Universitatis Klaipedensis* XXXIII (2016): 73-95.

6. This name was mentioned for the first time in a 1383 context, in the chronicle by Wigand of Marburg (Vygandas Marburgietis, *Naujoji Prūsijos kronika* (Vilnius: Vaga, 1999), 185). The Civitas Ruthenica was investigated more broadly in a 2013 dissertation by Jonaitis (see Rytis Jonaitis, *Civitas Rutenica Vilniuje XIII – XV a* (Klaipėda University, 2013).

7. The Catholic part of the city of Vilnius was discussed more broadly in the doctoral dissertation by the present author (see Irma Kaplūnaitė, *Vilniaus miesto katalikiškoji dalis XIV – XVI amžiaus pradžioje* (Klaipėda University, 2015).

sources even in the 17th century.[8] In addition, traces of this former division have survived in the street toponyms even in the current plan of Vilnius, where Catholic and Orthodox places of worship can be seen, each on their own side of Pilies Street.

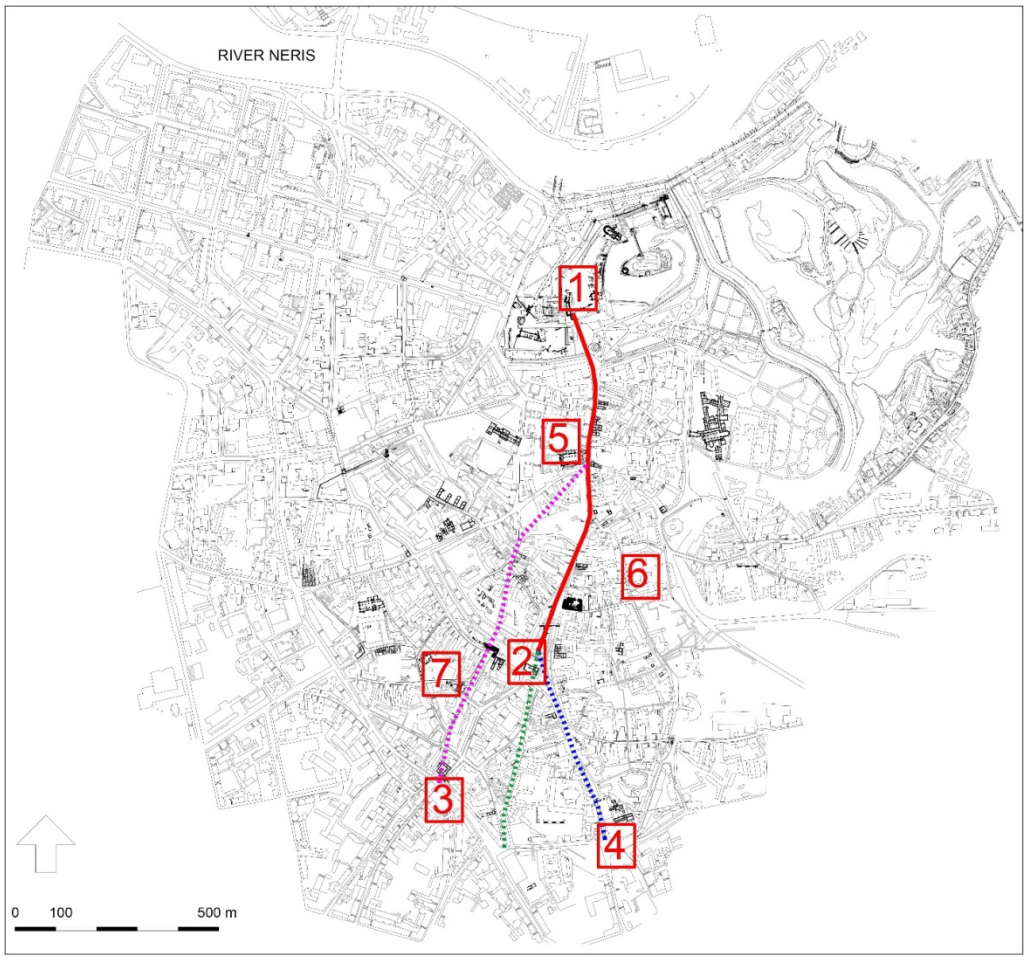

Figure 1. *Plan of Vilnius*

Note: Red line – investigated segment of Pilies Street; Violet dotted line – southwest branch of Pilies Street; Blue dotted line – present-day Aušros Vartų Street, the continuation of Pilies Street in the direction of Medininkai; Green dotted line – present-day Arklių Street, the suspected continuation of the early Pilies Street in the direction of Medininkai; 1 – Castle territory; 2 – Vilnius City Hall; 3 – Rūdininkai Gate; 4 – Medininkai (Aušra) Gate; 5 – Present-day Church of St John; 6 – Civitas Ruthenica; 7 – German City.

Source: Vaitkevičius, Gediminas, Valionienė, Oksana and Sarcevičius, Saulius. *Vilniaus archeologijos atlasas*. Vilnius: Lietuvos istorijos institutas, 2006; additions by I. Kaplūnaitė.

The paradox is that very little information is available about the emergence and formation of this central street of the city. The first authentic plan of the city of Vilnius (in the so-called Braun Atlas) is known from only the 16th century. The

8. Frick, *Kith, Kin and Neighbors,* 22-26.

lack of early, 13th–15th-century written sources is in general a very big problem in researching the city of Vilnius. The Grand Duchy of Lithuania remained pagan until 1387 and did not have its own script. The situation with the lack of available written sources[9] greatly hinders any research into the everyday life of early Vilnius, as well as into its urban spaces, the street network, and the early Christian communities in the city. It is Lithuania's political background that is more often investigated thoroughly. In such a situation, other data can provide more information, especially the material from archaeological investigations. For example, Vilnius was first mentioned in a letter written by Lithuanian Grand Duke Gediminas (1316–1341) and dated 25 January 1322.[10] But the archaeological data allow one to speak about the earlier creation of the city.[11] Diverse archaeological investigations have been intensively conducted in Vilnius since the mid-20th century and the city has been fairly well investigated archaeologically. The accumulated data allow one to investigate in greater detail the early stage of the development of Vilnius, the settling of spaces and their further expansion, and the development of the territories inhabited by the separate communities.

The purpose of this article is to examine more carefully the early history of what is perhaps the main street in Vilnius, Pilies Street, and the changes over the course of time. It discusses in what way this road was exceptional as well as when and how people settled along it. It seeks to examine how this street's settlement reflects in general the development of the city of Vilnius. This becomes possible after combining archaeological material with the sparse information from written sources, and also after making use of data from the investigation of the historical natural environment. The article first of all presents Pilies Street as part of the everyday life of the city's residents. It accents its role as the boundary between the city's different communities. It focuses on the early stage of its development, the 14th century, prior to the street becoming the 'Royal Road'. This period has been

9. For ex. some of the sources created in countries inimical to Lithuania (i.e., Christian) are frequently distinguished by their subjectivity or even propaganda where the Grand Duchy of Lithuania is portrayed as a barbarian land, for example, the description of the 1341 martyrdom of the Franciscans in Vilnius in the *Chronica XXIV Generalium Ordinis Fratrum Minorum* (written c.1374), published in Darius Baronas, *Vilniaus pranciškonų kankiniai ir jų kultas XIV – XX a* (Vilnius: Aidai, 2010), 238-241.

10. In four of his letters written in 1322–1323, Gediminas invited Catholic merchants and craftsmen to come to Vilnius, his capital, '*civitate nostra regia*' (our royal city) (see S. E. Rowell (Ed.), *Gedimino laiškai. Chartularium Lithuaniae res gestas magni ducis Gedeminne illustrans* (Vilnius: Vaga, 2003).

11. In 2006, the development of Vilnius was investigated in detail by Katalynas on the basis of primarily archaeological data; in 2010 by Vaitkevičius; and in 2019 by Valionienė (Kęstutis Katalynas, *Vilniaus plėtra XIV–XVII a.* (Vilnius: Diemedžio leidykla, 2006); Gediminas Vaitkevičius, *Vilniaus įkūrimas (Vilniaus sąsiuviniai t. I)* (Vilnius: Lietuvos nacionalinis muziejus, 2010); Oksana Valionienė, *Viduramžių Vilniaus erdvės evoliucija (XIII a. vidurys – XVI a. pirmas ketvirtis)* (Vilnius: Lietuvos Istorijos Institutas, 2019).

covered the least in the written sources and has been investigated the least in historiography.

Sources and the Condition of the Research

The available sources, which allow one to speak about the early stage of the development of Pilies Street, are very few in number and provide little information. The earliest iconographic source,[12] which presents an image of Vilnius, is the 1581 *Civitates Orbis Terrarum* by Georg Braun and Franz Hogenberg.[13] Although it contains numerous inaccuracies, is missing some of the streets, and portrays some of the objects loosely,[14] a wide thoroughfare, Pilies Street, is clearly distinguishable in the plan, but it has been substantially shortened. Nevertheless the main landmarks are very recognisable, the street runs from the castle territory to the Rotušės Square, and in the south part, as it should, leads to the Medininkai Gate. The plan reflects the situation in the 16th century when the city had already been surrounded by a defensive wall (built in 1503–1522).

Another source is a panoramic image of the city of Vilnius made by Tomas Makovskis c. 1600.[15] From it, it is possible to create an impression about the city's development that existed at that time and to notice the houses and main landmarks that stood on Pilies Street. Pilies Street is also marked in the 1672 description made by the metropolitan of Kiev.[16] This document is especially significant in researching the separate parts of the city of Vilnius, Catholic and Orthodox. The locations of the Orthodox churches that existed in 17th-century Vilnius are fairly accurately marked on the plan. The boundary position of Pilies Street, i.e. the concentration of Orthodox churches exclusively to the east of it, is very well reflected in this source. Another source, which needs to be addressed, is the so-called Fürstenhoff plan made in 1737.[17] This plan is distinguished by

12. The newest and most complete digest of the plans of the city of Vilnius was compiled in 2016 (I. B. Tamošiūnienė, R. Vitkauskienė, and A. Žilevičiūtė (Eds.), *Vilniaus miesto planai (*Vilnius: Lietuvos Nacionalinis Muziejus, 2016). Digital versions of old plans are available on websites, for ex. The city of Vilnius in topographic maps and plans, http://www.maps4u.lt/lt/viewpage.php?page_id=59. [Accessed 18 February 2020.]

13. Georg Bruyen and Frans van Hoogenbergh, *Plan of the City of Vilnius. Orbium praecipuarum totius mundi. Liber tertius. Colonia Agripina, 1.* 59, 1581.

14. The plan was investigated in detail by Drėma already in 1991 (Drėma, *Dingęs Vilnius*, 28-33).

15. Tomasz Makowski, *Vilniaus miesto panorama* (Ofortas, 1600).

16. *Инвентарь и реестры Митрополитальной юрисдики в Вильне (*Saint Petersburg Institute of History Archive, Fund. 52, File No. 206, 1672).

17. Johann Georg Maximilian Fürstenhoff, *Plan von der Stadt Wilda oder Willna in Littauen* (1737).

especially high accuracy and detail, the explication names 115 of the city's most famous architectural landmarks of that time.[18] But it needs to be noted that all of the above plans date to the Modern Era and reflect the situation of that time.

A similar chronological problem exists with the written sources. The archival data usually goes back to a period no earlier than the 17th century and many of them only to the end of that century or the 18th century.[19] Very few sources reflect the 16th century, not to mention an earlier period, only some privileges and house and/or plot purchase documents being known from that time.[20] This situation in large part occurred due to historical circumstances; in 1655–1661 Vilnius was devastated by a Muscovite army and a large part of the sources were destroyed during a fire.[21]

A 1636 Vilnius census, which was made in receiving guests of the city, needs to be mentioned as an exceptional document. It thoroughly describes the arrangement of the contemporary houses in the city, the condition of the buildings, and their owners.[22] Pilies Street receives a great deal of attention with detailed descriptions of the houses that stood on it and their ownership. As is seen from the description, Pilies Street was an exceptional part of the city in the 17th century, a place where representatives of the elite, important political figures, priests, and merchants lived and pharmacies, shops, inns, and bookbinders as well as various craftsmen, barbers, many stables, etc. could be found.[23] As Paknys, an investigator, has noted, obtaining a large plot on Pilies Street was difficult and erecting a masonry house there already a sign of great ambition.[24] In modern terms, it is possible to call Pilies Street a prestigious city street.

In historiography, both in 19th-century[25] and in the latest works as well as in popular travel guides,[26] Pilies Street is described as one of the oldest and most important of the city's streets. But there is a complex situation with the written

18. For greater detail, see Drėma, Dingęs Vilnius, 40.

19. Some magistrate acts and information, which have survived from the 17th century, are also included in the Lithuanian Metrica (the document archive of the Grand Duchy of Lithuania) (cf. Paknys, *Vilniaus miestas ir miestiečiai,* 14).

20. Čaplinskas investigated the earliest references to individual houses on Pilies Street (Antanas Rimvydas Čaplinskas, *Vilniaus gatvių istorija. Pilies gatvė* (Vilnius: Charibdė, 2005).

21. For more, see, for ex. Elmantas Meilus, "Rusų okupacinė valdžia Vilniuje 1655–1661 m.," in *Lietuva ir jos kaimynai: nuo normanų iki Napoleono: Prof. Broniaus Dundulio atminimui* (ed.) I. Valikonytė, 278-295 (2001).

22. Mindaugas Paknys presented this source in detail in a separate publication (Paknys, *Vilniaus miestas ir miestiečiai*).

23. For a description of each house, see Paknys, *Vilniaus miestas ir miestiečiai*, 85-114.

24. Ibid, 21.

25. for ex. Adomas Honoris Kirkoras, *Pasivaikščiojimai po Vilnių ir jo apylinkes* (Vilnius: Mintis, 1991).

26. For ex., V. Kandrotas (Ed.), *Įdomiausios kelionės po Lietuvą. Kelionių žinynas* (Vilnius: Terra Publica, 2017), 15.

sources, which usually focus on the street's late history beginning in the 18th century, the early period being described using fairly cliché phrases that call the street one of the earliest in Vilnius and one of the most opulent.

The late 19th – early 21st century saw the appearance of several works, which presented and investigated Vilnius houses on the basis of archival and iconographic sources. The benchmark among them was a book written by Vladas Drėma in 1991 *Dingęs Vilnius*,[27] which discusses in detail the houses that stood on Pilies Street. One work from the series *Vilniaus gatvių istorija* by Antanas Rimvydas Čaplinskas is devoted exclusively to Pilies Street[28] and presents Pilies Street during the 18th–20th centuries. David Frick's monograph presents data about the 17th-century history of Pilies Street in English.[29]

In such a situation where researchers are working with late written sources, it is understandable that one needs to look for more information elsewhere. The inclusion of archaeological material in research can especially give things a push. Several works that investigate the history of Vilnius on the basis of archaeological data have so far been written. The first of these is the monograph by Kęstutis Katalynas, which presents the development of Vilnius during different chronological periods.[30] Then there is the book by Gediminas Vaitkevičius that is devoted to the emergence of the city of Vilnius.[31] It is possible to also mention several others based mostly on archaeological material. First is a doctoral dissertation written by Linas Girlevičius about the defensive installations of Vilnius during the 14th–18th centuries.[32] Another work, a dissertation by Rytis Jonaitis, investigates the Orthodox Christian suburb of Vilnius.[33] The dissertation by the author of this article is devoted to the part of the city settled by Catholics.[34] Inevitably more or less attention is devoted to Pilies Street in these. The last two, the dissertations by Jonaitis and the present author, present two Christian immigrant communities in Vilnius and therefore inevitably also mention Pilies Street, all the more since in the Middle Ages it was the boundary separating/ joining these communities. Nevertheless the main object of the research in the aforementioned books was not this street and therefore the information in them about Pilies Street is more secondary.

Another investigator who needs to be mentioned is Urban Researcher Oksana Valionienė, whose dissertation[35] and latest 2019 monograph[36] investigate

27. Drėma, *Dingęs Vilnius*.

28. Čaplinskas, *Vilniaus gatvių istorija*.

29. Frick, *Kith, Kin and Neighbors*, 22–26.

30. Katalynas, *Vilniaus plėtra*.

31. Vaitkevičius, *Vilniaus įkūrimas*.

32. Linas Girlevičius, *Gynybiniai įrenginiai XIV–XVIII a. Vilniuje* (Vilnius, 2008).

33. Jonaitis, *Civitas Rutenica Vilniuje*.

34. Kaplūnaitė, *Vilniaus miesto*.

35. Oksana Valionienė, *Vilniaus erdvinė raidos struktūra viduramžiais* (Klaipėda University, 2015).

the spatial structure of Vilnius. Although the author accents the importance of an east-west road[37] somewhat more than that of Pilies Street in early Vilnius history, she also presents significant insights about the north-south road. The investigation conducted by Valionienė at the start of Pilies Street (near the royal castle) was important.[38] On the basis of the data from numerous archaeological excavations conducted in the territory of the Lower Castle in Vilnius and the dendrochronological analysis of the wood discovered there, Valionienė showed that the moment of Pilies Street's 'birth' is the 1320s, roughly 1326–1327.[39] But only the street's north segment was so dated, meanwhile the south segment of Pilies Street, according to the author, formed somewhat later, around the mid-14th century.[40] As will be shown below, the archaeological data does not conflict with such a statement.

In addition to the historical sources and archaeological material, the analysis of the natural environment is also very important for the investigation of Vilnius Streets. Historiography contains few works on this topic, but several works do devote space to the relief and geology of the old city. One of the significant investigations is the 2012–2013 project by the Lithuanian Institute of History and the Lithuanian Institute of Geology 'Transformation of natural conditions in Lithuanian cities, 1st stage, on the example of 14th–18th century Vilnius', the results of which have been discussed in two articles.[41] As is seen below, they also devote space to the environment of Pilies Street.

Several works important to the present investigation have been mentioned. But the street's boundaries, its more precise development, and possible reasons for these changes have yet to be established. The early history of the people who settled around Pilies Street remains especially problematic, the influence of the city residents, as the living heart of the city, on the street's formation processes has not been investigated. But an analysis of the existing research has shown that the inclusion of archaeological material can be especially promising in this

36. Valionienė, *Viduramžių Vilniaus erdvės*.

37. Ibid, 96-97. The hypotheses about importance of the east-west road were first posed by investigators in the first half of the 20th century (Mieczysław Limanowski, "Najstarsze Wilno," *Wilno i ziemia Wilenska t. 1* (1930): 127-143; Marian Morelowski, *Vilnius prieš 1655 metus. Rekonstrukcinio plano 318 numerių paaiškinimas* (Vilnius, 1940–1942).

38. Valionienė, *Vilniaus erdvinė raidos*, 141-145; Valionienė, *Viduramžių Vilniaus erdvės*, 135–138.

39. Valionienė, *Viduramžių Vilniaus erdvės*, 138

40. Ibid, 282-283, il. 33.

41. Regina Morkūnaitė, Aldona Baubinienė, Gediminas Vaitkevičius and Daumantas Bauža, "Geografinė-istorinė gamtinių sąlygų interpretacija Vilniaus miesto kūrimosi ir plėtros eigai atkurti," *Geologijos akiračiai*, no. 3 (2015): 15-22; Aldona Baubinienė, Regina Morkūnaitė, Daumantas Bauža, Gediminas Vaitkevičius and Rimantas Petrošius, "Aspects and methods in reconstructing the medieval terrain and deposits in Vilnius," *Quaternary International* 386 (2015): 83-88.

situation. These data allow one to examine the street and its history from a somewhat different perspective.

The Archaeological Investigation of Pilies Street

The archaeological investigation of Vilnius began in the mid-20th century. Various modern investigations have been conducted in nearly all of the Vilnius Old Town streets, especially in the territory of the former castles.[42] But the extent of these investigations varies from field surveys and monitoring to excavations. Joining all of these objects into one whole, however, has yielded a dense network of investigated areas. In speaking specifically about Pilies Street, the history of the city's development has hindered the archaeological investigations there. The street is considered prestigious and various construction and reconstruction work occurs there routinely. In addition, the majority of the buildings have basements, which were built by destroying the earlier cultural layers. Nevertheless several objects excavated on Pilies Street or beside it have yielded significant information. An analysis of the incidence of the earliest cultural layer and archaeological material (especially household pottery)[43] has provided more information for the recreation of the 14th-century development of Pilies Street. On the basis of systemised research data, it is possible to distinguish several contemporary find spot concentrations. Let us now discuss them, beginning with the northernmost part of the street and its beginnings and then moving south.

The start of Pilies Street is the territory of the castles of the Grand Dukes of Lithuania (Figure 1: 1).[44] The early city consisted of several parts: the residential Castle on Gediminas Hill (or the Upper Castle), the so-called Crooked City (Curvum Castrum) opposite Gediminas Hill,[45] and the hill's foot, inhabited since the late 13th century, with the Royal Palace (or the Lower Castle) at the southwest

42. The archaeological investigations conducted prior to 2006 in Vilnius were systemised by Katalynas (Katalynas, *Vilniaus plėtra*). The archaeological situation of the east part of Vilnius was discussed by Jonaitis (Jonaitis, *Civitas Rutenica Vilniuje*). The archaeological investigation of the territory of the German City and the incidence of the household pottery have been investigated in detail in the dissertation by the present author (Kaplūnaitė, *Vilniaus miesto katalikiškoji dalis*). A summary of the latest archaeological research (up to 2019) is presented in the monograph by Investigator Valionienė (Valionienė, *Viduramžių Vilniaus erdvės*).

43. This article uses information from archaeological investigation reports. Some of the household pottery was dated anew by the present author and Archaeologist Dr Vaitkevičius (For complete data and the dating of each sherd, see Kaplūnaitė, *Vilniaus miesto katalikiškoji dalis*, 147-180, annex No. 13).

44. Archaeological excavations have been conducted in the castle territory from 1987 to the present day. This is a priority archaeological investigation site in the city.

45. It was burnt on 16 September 1390 (Gediminas Vaitkevičius and Milda Lidija Kiškienė, "Kreivasis miestas," in *Miestų Praeitis 2* (ed.) G. Vaitkevičius.

foot.[46] Several fragments of wooden paving running in the same direction as later Pilies Street, the earliest of which dates to the 1320s, were discovered during the archaeological investigation in the southwest area of the territory of the Lower Castle.[47] On the basis of these data and an analysis of the spatial structure, Valionienė agrees with the hypothesis, previously proposed in historiography, that Pilies Street is not necessarily the oldest street to connect the castle with the city and that its formation should be dated to roughly 1326–1327.[48] This hypothesis is based on archaeological material and corresponds to the historical context. In addition, a dendrochronological analysis confirms that such a date for the appearance of the direction of future Pilies Street also corresponds with a new stage in the development of the royal castle, i.e. various reconstructions.[49]

Moving south from the castle territory, another concentration of 14th-century finds important for the investigation is around the 1387 Catholic Church of St John (Figure 1: 5). Although the earliest human activity in this area should be associated with the period after the official Catholic baptism of Lithuania, the relatively numerous ceramic finds allow the beginning of this area's settlement to be moved back to the third quarter of the 14th century. The assumption has been proposed that one of the early city's marketplaces could have existed at this location.[50] Finds and a cultural layer dating to this period were also discovered nearby, to the east and west of the later church.[51]

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46. For greater detail about the Vilnius find spots of layers and structures from the 1290s, see Vaitkevičius, *Vilniaus įkūrimas*, 49-62; Saulius Sarcevičius, Oksana Valionienė and Virginijus Pugačiauskas, *Kreivoji pilis: tarpdisciplininių tyrimų atvejis* (Vilnius: Lietuvos Istorijos Institutas, 2016); Valionienė, *Viduramžių Vilniaus erdvės*, 73-74, 147-155.

47. Rutilė Pukienė, "Mediniai XIV a. kelio grindiniai Vilniaus žemutinėje pilyje. Dendrochronologinė analizė ir datavimas," *Vilniaus žemutinė pilis XIV a. – XIX a. pradžioje. 2005 – 2006 m. tyrimai* (2007): 190-191; Valionienė, *Viduramžių Vilniaus erdvės*, 135.

48. Valionienė, *Viduramžių Vilniaus erdvės*, 135-138.

49. Ibid, 138.

50. Morelowski, *Vilnius prieš 1655 metus*.

51. For ex. Universiteto St. 1-2 (Stasys Patkauskas, *1978 m. archeologinių tyrimų Vilniuje, Universiteto g. Nr. 1/2 ataskaita* (Vilnius: The Lithuanian Institute of History, Manuscript Section, File No. 647, 1979), on the grounds of present-day Vilnius University (Liudvikas Dzikas, *VVU kiemuose vykdytų mechanizuotų žemės kasimo darbų archeologinės priežiūros ir fiksacijos ataskaita (*Vilnius: The Lithuanian Institute of History, Manuscript Section, File No. 649, 1979); Albertas Lisanka, *1976 – 1977 m. Vilniaus m. Universiteto kiemuose vykdytų inžinerinių-geologinių žemės darbų archeologinės priežiūros ir fiksacijos ataskaita (*Vilnius: The Lithuanian Institute of History, Manuscript Section, File No. 722, 1979). Pottery dated to the first quarter and mid – third quarter of the 14th century was discovered at Pilies St. 24 to the east of the church (Algis Kuzmickas, *Archeologiniai tyrimai Vilniuje, Pilies g. 24. Ataskaita. T. 1* (Vilnius: The Lithuanian Institute of History, Manuscript Section, File No. 2404, 1995), sherds dated to the second quarter of the 14th century on the west side of Pilies Street at present-day Šv. Ignoto St. 9 (Daiva Luchtanienė, *Vilniaus senojo miesto vietos (1610 K1), Šv. Ignoto g. 9 Vilniaus mieste archeologinių tyrinėjimų 2002 metais*

Figure 2. *Pilies Street Segment and the Church of St John*
Source: I. Kaplūnaitė.

On the basis of the archaeological data, it is possible to propose the assumption that the Pilies Street segment from the castle territory to the future Church of St John (Figure 2) began to form already in the first half of the 14th century, although more intense activity is observable already in the second half of the century. It is thought that such early settlement of an area beside a future church could be explained as a question of convenience. The area is near the royal property (350–370 m to the south of the south-southwest foot of Gediminas Hill), its location in a level field is near sources of water (about 200 m to the north and northwest), and it had convenient communication with the Crooked City during the period under discussion. Several other foci of human activity somewhat further from Pilies Street can also be associated with precisely this convenient communication in this direction.[52] On the basis of the available data it is seen that an intersection of two

ataskaita (Vilnius: The Lithuanian Institute of History, Manuscript Section, File No. 3972, 2003), annex No. 13).

52. For ex. at Dominikonų St. 16, Šiltadaržio St. 6, in the vicinity of Šv. Mykolo Street (Evaldas Vailionis, *Vilniaus senamiesčio (AR 5 a, c), Šv. Mykolo g. 10 2000 m. archeologinių žvalgomųjų tyrimų ataskaita* (Vilnius: The Lithuanian Institute of History, Manuscript Section, File No. 3805, 2002); Jonas Stankus, *Archeologinių tyrinėjimų Vilniaus senojo miesto vietos su priemiesčiais (A1610K2), Šv. Mykolo g. Nr. 12, buto Nr. 1 būsimame rūsyje, 2002 m. ataskaita* (Vilnius: The Lithuanian Institute of History, Manuscript Section, File No. 3942, 2003), and on the grounds of the present-day Vilnius Academy of Arts (Gediminas

roads leading in two main directions (north-south and east-west) could have existed at the future site of the Church of St John already in the first half of the 14th century. In this way, this early segment of Pilies Street joined the castle territory with one of the nuclei of the new city.

The earliest segment of Pilies Street has been fairly precisely identified and dated, but the street's further development poses more questions. The present-day street's path runs due south to City Hall. But it has not been established whether such a situation already existed in the first half – mid-14th century. The hypothesis has been proposed that the street at that time probably did not exist at the present location but led more to the southeast.[53] This direction of the early Pilies Street should be associated with special features of the city's development. At this point it is necessary to discuss an object, which could have influenced the street's direction, i.e., the aforementioned part of Vilnius settled by Orthodox Christians, the Civitas Ruthenica. This entity was on the east side of present-day Pilies Street (Figure 1: 6). Aside from the castle territory, this was perhaps the earliest settled part of present-day Vilnius Old Town.[54] The earliest object in the territory of the Civitas Ruthenica is the cemetery on Bokšto Street, which dates to the last third of the 13th – early 15th centuries.[55] The growth of the Orthodox Christian suburb can be observed throughout the 14th century and Pilies Street should definitely be considered its long-time western boundary.[56] It needs to be noted that this suburb could have also been a factor, a magnet pulling Pilies Street more to the southeast in the first half of the 14th century.

In the northwest part of the Civitas Ruthenica, right beside Pilies Street, is one of the earliest Orthodox churches, the Church of St Paraskevi (Figure 3). It is thought that it could have been built no later than 1346.[57] The location of this church is important in that a Church of St Paraskevi is often built near the marketplace in Kievan Rus' cities. It is possible to propose the assumption that in

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Vaitkevičius, *Valstybinis Dailės institutas Vilniuje, Maironio g. 6. Vykdytų archeologinių tyrimų (1986–1987 m.) ataskaita* (Vilnius: The Lithuanian Institute of History, Manuscript Section, File No. 1585, 1988).

53. cf Valionienė, *Viduramžių Vilniaus erdvės*, 280–281.

54. For more about the Civitas Ruthenica, see Jonaitis, *Civitas Rutenica Vilniuje*. For an article in English, see Rytis Jonaitis, "Civitas Rutenica in Early Vilnius in the 14th and 15th Centuries. The Socio-cultural Aspect," *Archaeologia Baltica* 18 (2012): 256-269; Rytis Jonaitis and Irma Kaplūnaitė, "The Excavation at Bokšto St. 6, Vilnius," *Archaeological Investigations in Independent Lithuania. 1990 – 2010* (2012): 156-159.

55. The dating is based on archaeological material as well as 14C testing conducted on 26 bone collagen samples (for the results, see Rytis Jonaitis and Irma Kaplūnaitė, *Senkapis Vilniuje, Bokšto gatvėje. XIII – XV a. laidosenos Lietuvoje bruožai* (Vilnius: Lietuvos Istorijos Institutas, 2020), 257-275). This object was presented in a book by Jonaitis and Kaplūnaitė (ibid).

56. Jonaitis, *Civitas Rutenica Vilniuje*, 31.

57. Юлиан Фомич Крачковский, "Православныя свяыни города Вильны," *Труды девятаго археологическаго съезда въ Вильне 1893* (1897): 225.

the same way, one of the earliest marketplaces could have stood near precisely this church in Vilnius. The importance of the site in the spatial structure of the new city is shown by the fact that roads from two directions, Minsk and Polotsk (present-day Belarus), intersect there.[58] In this way it is possible to date this segment of Pilies Street between the Catholic Church of St John and the Orthodox Church of St Paraskevi to the first half or mid-14th century.

Figure 3. *The Church of St Paraskevi and the Southeast Part of Vilnius Old Town*
Source: I. Kaplūnaitė.

Other traces of human activity along Pilies Street date to the third quarter of the 14th century. The archaeological layer and artefact find spots in the territory of Old Town show that at that time Pilies Street could have had another branch in the southwest (Figure 1, violet dotted line). After evaluating the archaeological material it is seen that several foci of human activity are arranged in this direction, almost in one stretch.[59] The find spots are scattered from the Church of

58. Valionienė, *Viduramžių Vilniaus erdvės*, 150.

59. A concentration of third quarter of the 14th-century pottery incidence points were observed in the vicinity of present-day Stiklių Street (Tauras Poška, *Archeologijos tyrinėjimai Vilniuje, Stiklių g. 7, 7a 2001 m. Ataskaita* (Vilnius: The Lithuanian Institute of History, Manuscript Section, File No. 3716, 2001); Danutė Bešėnienė, *Vilnius, teritorijos tarp Stiklių gatvės ir Stiklių skg. žvalgomųjų archeologinių tyrimų ir žemės kasimo darbų priežiūros bei fiksacijos ataskaita* (Vilnius: The Lithuanian Institute of History, Manuscript Section, File No. 472, 1978); Povilas Tebelškis, *Žemės kasimo darbų, vykdytų pastato Stiklių gt. Nr. 7 remonto-restauracijos metu archeologinės priežiūros ir fiksacijos ataskaita* (Vilnius: The

St John right to the Rūdininkai Gate of the 16th-century defensive wall (between Figure 1: 5 and Figure 1: 3). A clear concentration of third quarter of the 14th-century pottery and the remains of a wooden fence were also found beside the site.[60] The finds are not numerous and it is possible to only speak of non-intense human activity. Nevertheless it is clear that the ceramic incidence points echo the direction of the road from the castle territory towards Rūdninkai. Thus, the emergence of the southwest branch of Pilies Street was connected precisely with movement in this direction. The city at that time, in the mid-14th century, was not yet so economically capable that large areas could be settled at once and therefore only several points of human activity (isolated farmsteads) along a significant direction can be distinguished. The main road in medieval cities was very important for the directions of their growth and expansion, especially in continental cities where trade roads were more important than rivers.[61] For example, it was noticed in 13th-century England that a city was laid out no longer around the ruler's castle or the monastery gate, but at a communications hub; thus better commercial possibilities became more important for a city than the ruler's aegis.[62] Such a situation can be seen in Vilnius in the third quarter of the 14th century where the importance of a road was appreciated and people began to settle beside it. This is natural because the Rūdninkai road was very important domestic direction.

One more object, which influenced the spatial development of Vilnius and at the same time the development of Pilies Street, needs to be discussed at this point, namely the Catholic German City/suburb (Figure 1:7), which began to form in the 1370s.[63] In the early development stage this part of the city did not seem very connected with Pilies Street, i.e., it was distant from it. As is asserted in historiography, this suburb location, which is not beside a main road, seems at

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Lithuanian Institute of History, Manuscript Section, File No. 642, 1979). These points were further supplemented by the find spots laid out in the same line at present-day Mėsinių St. 8/11 (Audrius Astrauskas, *Vilnius, Mėsinių g. buv. namo Nr. 11/8 vietoje vykdytų žemės kasimo darbų archeologinės priežiūros ir archeologinių tyrinėjimų ataskaita. Pirmas etapas* (Vilnius: The Lithuanian Institute of History, Manuscript Section, File No. 1587, 1988), in the district of Ašmenos, Mėsinių, and Dysnos Streets (Valdas Vainilaitis, *2002 m. archeologijos tyrimai tarp Ašmenos, Mėsinių, Dysnos gatvių Vilniuje* (Vilnius: The Lithuanian Institute of History, Manuscript Section, File No. 3961, 2003), and in the east part of Vokiečių Street (Stasys Patkauskas, *Vilnius, Muziejaus g. 6, 8, 10. Archeologinių tyrimų ataskaita* (Vilnius: The Lithuanian Institute of History, Manuscript Section, File No. 1446, 1986).

60. Saulius Sarcevičius, *1999 m. Vilniuje, Pylimo–Rūdninkų gt. kampe, šalia miesto gynybinės sienos vykdytų archeologijos tyrimų ataskaita* (Vilnius: The Lithuanian Institute of History, Manuscript Section, File No. 3346, 1999).

61. John Schofield and Alan Vince, *Medieval Towns. The Archaeology of British Towns in Their European Setting* (London: Equinox, 2003), 37.

62. Ibid.

63. Kaplūnaitė, *Vilniaus miesto katalikiškoji dalis*, 60-66.

first glance to be fairly strange.[64] But after evaluating that one branch of Pilies Street could have at that time run more southwest, it becomes clear that the early German City was founded beside precisely this road. It needs to be noted that an analysis of the natural environment can also provide an explanation for the position of the street, i.e., it is possible connect the road's formation at precisely this location with favourable natural conditions. In the south part, the road runs not over the hill but around it where there is more level relief, i.e., more southwest (roughly present-day Mėsinių Street, Figure 1, violet dotted line). In addition, this road runs along a gravel corridor.[65] The importance of the territory is shown by the fact that in the 16th century one of the city's gates was built there.

The situation changed even more in the period after 1387. After the Catholic baptism the growth of the German City accelerated greatly, both Catholic immigrants and former pagan Lithuanians settling there. While the suburb grew more in the southwest part of the city up until then, in the late 14th – early 15th centuries it expanded east, to the very line of present-day Pilies Street, which became its eastern border. Thus, from the third quarter of the 14th century it is possible to talk about the creation of Orthodox and Catholic communities in the east and west parts of Vilnius, respectively. And from at least the 14th–15th centuries the communities approached one another and Pilies Street became the clear dividing line between them.

Now to examine the end of Pilies Street in the city, i.e. present-day City Hall on Rotušės Square (Figure 1: 2). The City Hall must have been built after Grand Duke Jogaila (1377–1392) of Lithuania granted the city of Vilnius and its residents privileges during the 1387 baptism. Because there are no data about the location of the first City Hall, it has been speculated that it was at the site of the present-day City Hall building. But in the sources the oldest Vilnius City Hall at this site is marked in only 1432.[66] An earlier, late 14th-century masonry wall was discovered in the southeast corner of the building.[67] The hypothesis has been proposed that in the late 14th century this was the site of a tower house,[68] which, in the 15th century, was reconstructed, expanded, and adapted to become the City Hall.[69] Such a tower house location is not accidental; usually these buildings acted as

64. Morkūnaitė, Baubinienė, Vaitkevičius, Bauža, "Geografinė-istorinė gamtinių sąlygų interpretacija", 20.

65. As natural environment research has shown, the early main streets of Vilnius coincide with such gravel corridors, of which there are at least 5 in the territory of the Old Town (ibid).

66. Drėma, *Dingęs Vilnius*, 146.

67. Idalija Bėčienė, *Vilniaus rotušė, Didžioji g. 31 žvalgomieji architektūriniai tyrimai* (Vilnius: Vilnius Regional State Archives, Fund 2, File No. 719, 1995), 2-3.

68. A tower house (*Turmhaus*) is a building with tower proportions and a dual defensive/residential purpose that dominates the surrounding area.

69. Irma Kaplūnaitė and Fumito Tomoi, "Bokštiniai namai Vilniuje," in *Miestų Praeitis* 2 (ed.) G. Vaitkevičius (Vilnius, 2010).

control points, had a defensive purpose, were frequently erected at the site of important intersections, and marked both the city's outer limits and important internal points. In addition, in this case of Vilnius, precisely this location was the boundary between the areas settled by Orthodox and Catholic Christians.

Archaeological investigations have been conducted in Rotušės Square since 1976,[70] and excavations in 2005–2007.[71] The analysis of the cultural layer stratigraphy confirmed that prior to second quarter of the 15th century no marketplace had existed there. The situation in the vicinity of the City Hall building changed only in the second quarter 15th century when a city marketplace began to form there (Figure 4). From the mid-15th century it grew to become the main city marketplace and at the same time a magnet, building density increasing around it. At the same time the marketplace reflects the effect of different religions on the plan of the city. The market square joins (separates) the spaces between the Catholic part of the city in the west and the Orthodox Christian part in the east. During the course of the entire 15th century, these two city districts came closer to one another, but did not merge and between them, as has already been mentioned, remained a very clear boundary, i.e., Pilies Street. In addition, the natural condition must have played a not insignificant role at this location. As the investigation of the natural environment showed, to the south of the later City Hall building the Catholic and Orthodox Christians were separated by a natural boundary, a steady stream of water flowed through the quarter until it was urbanised in the 16th century by channelling the surface water.[72] It is possible to talk about the merging of these two districts only from the 16th century.

70. Irena Jučienė, *Žvalgomųjų archeologinių tyrimų už šiluminių tinklų trasos (Muziejaus g. – Bokšto g., einančios į Paupio – Rasų rajoną) atkarpa nuo Vilnelės iki A. Vienuolio mokyklos ir ties Dailės muziejumi, ataskaita* (Vilnius: The Lithuanian Institute of History, Manuscript Section, File No. 1058, 1976).

71. Arūnas Puškorius, *Vilniaus rotušės aikštėje ir jos prieigose 2005 m. vykdytų archeologijos tyrimų ataskaita (rankraštis)* (2005); Rytis Jonaitis, *Vilniuje, senojo miesto vietoje (A1610K1), Rotušės a. ir jos prieigų, 2006 m. vykdytų archeologijos tyrimų ataskaita* (Vilnius: The Lithuanian Institute of History, Manuscript Section, File No. 5143, 2006); Irma Kaplūnaitė, *Vilniuje, senojo miesto vietoje (A1610K1), Rotušės a. ir jos prieigose, 2007 m. vykdytų archeologijos tyrimų ataskaita* (Vilnius: The Lithuanian Institute of History, Manuscript Section, File No. 4933, 2007).

72. Morkūnaitė, Baubinienė, Vaitkevičius, and Bauža, "Geografinė-istorinė gamtinių sąlygų interpretacija", 19.

Figure 4. *Archaeological Excavations at Rotušės Square, 2005*
Source: Rytis Jonaitis.

Although Pilies Street ends at City Hall, it is expedient to remember its continuations. One of them, the southwest (Rūdininkai) road was presented in examining the location of the German City. More questions arise concerning the street's continuation towards Medininkai (and beyond that, Minsk and Lida, i.e., present-day Belarus). Already in the early 20th century the assumption arose that the early southern continuation of Pilies and Didžioji Streets ran not along present-day Aušros Vartų Street (Figure 1: blue dotted line), but further south, along present-day Arklių Street (Figure 1, green dotted line), and corresponded with the boundary between the Orthodox and Catholic parts of the city.[73] The archaeological and geological data provide more clarity.

On the basis of the geological investigation data it was established that present-day Aušros Vartų Street (Figure 1:4) was formed only in the 16th century because springs and peaty areas had existed there up until then.[74] Thus, the old Medininkai road must have been located elsewhere. It is possible that it ran further south (Figure 1, green dotted line). The archaeological data has confirmed this road location. Several second half of the 14th-century artefact and cultural

73. Maria Lowmianska, *Wilno przed najazdem Moskiewskim 1655 roku* (Wilno: Magistrat m. Wilna, 1929).

74. Morkūnaitė, Baubinienė, Vaitkevičius, and Bauža, "Geografinė-istorinė gamtinių sąlygų interpretacija", 20.

layer find spots were located along the suspected route.[75] During the 14th and 15th centuries, this area was convenient to settle: a leveller field, to the south and west of which lay swampy, watery areas, and to the east, i.e. towards present-day Aušros Vartų Street, higher ground and a forest.[76] Thus, a location more convenient for movement was selected. Meanwhile the formation of the Pilies Street southeast continuation (Figure 1, blue dotted line) should be associated now with only the 16th century. At that time, in building the city's defensive wall and gates, the water was managed at this site and the route extended and connected with City Hall and the already existing streets.[77]

The systemised data show that the importance of Pilies Street was already appreciated in the 14th century. Its significance especially grew in the second half of the century when human settlement intensified in the territory of present-day Old Town, the Vilnius suburbs settled by members of two branches of Christianity forming and growing there. It was no accident that the end of Pilies Street was selected as the site of City Hall. The street's role grew even more in the first half of the 15th century when a central marketplace, the largest in the city, began operating there. Thus the street joined two centres: the royal castle and City Hall. The peak of the development of Pilies Street should be associated with the construction of the defensive wall (1503–1522), when the city's defensive gates were built on the street's two branches.

75. Material dating to the third quarter of the 14th century has been discovered in present-day Visų Šventųjų Street (Saulius Sarcevičius, *1999 m. Vilniuje, Visų Šventųjų gt. Nr. 5-4 žvalgomųjų archeologinių tyrimų ataskaita* (Vilnius: The Lithuanian Institute of History, Manuscript Section, File No. 3364, 2000); Atas Žvirblys, *Vilniuje, Visų Šventųjų 5–1, 2010 m. archeologinių tyrimų ataskaita* (Vilnius: Lithuanian National Museum Archive, File No. 766, 2011), second half of the 14th-century material at present-day Arklių g. 5 (Vytautas Ušinskas, *Valstybinio Jaunimo Teatro priešscenis Vilniuje, Biržų g. Nr. 2 (Arklių g. Nr. 5). Inžinerinių-geologinių tyrimų archeologinės priežiūros ir fiksacijos ataskaita* (Vilnius: The Lithuanian Institute of History, Manuscript Section, 1978).

76. Morkūnaitė, Baubinienė, Vaitkevičius, and Bauža, "Geografinė-istorinė gamtinių sąlygų interpretacija," 20.

77. Ibid.

Conclusions

One of the exceptional features of Vilnius is the convenience of its zoning where different communities were able to settle at the same time, but separate from one another. As the conducted investigation showed, the development of Pilies Street is closely connected with the emergence and development of these separate Vilnius zones. In other words, the earliest human settlement in the first half of the 14th century in the present-day territory of Vilnius Old Town is inseparable from Pilies Street, the north-south road. The analysis of the former natural conditions showed that the natural geological situation in the city had created a crucial influence for Pilies Street. The location of gravel corridors, small hills, bodies of water, springs, and forests in large part affected the street's location. In other words, considering the natural conditions, it was situated at the most convenient location that was the easiest to adapt to movement.

The birthplace of Pilies Street was the castle territory in the 1320s. The earliest segment, which formed in the first half of the 14th century, ran between the castle territory and the present-day Catholic Church of St John (founded in 1387). This territory should be associated with pagan elements in the new city of Vilnius. On the basis of an analysis of the archaeological material it is seen that from there the earliest continuation of Pilies Street formed in the direction of the Civitas Ruthenica, the Orthodox Christian suburb. Pilies Street became its western boundary. In the mid-14th century it is possible to talk about the part of the street at the Orthodox Church of St Paraskevi. The street's further development was a branch to the southwest, in the direction of another important centre of the Grand Duchy of Lithuania, Rūdininkai. The development towards precisely this city had to have determined the importance of this road in the internal system. The initial, although not yet intense, settlement of people along this road can be traced archaeologically from at least the second half of the 14th century. At that time, from the 1370s, a Catholic German City, another entity influencing the development of Pilies Street, formed in the southwest part of Pilies Street. In the course of time it expanded right up to present-day Pilies Street, which became its eastern boundary. In the late 14th century, the southern point of Pilies Street, a suspected tower house at the site of present-day City Hall, has also become clear. There was not only an intersection there, but also the boundary between the city's two Christian communities, the Orthodox and Catholic suburbs.

At the site of a tower house in the first half of the 15th century, the Vilnius City Hall was built and beside it a central city marketplace began to operate. The heyday of Pilies Street should be connected with precisely the formation of City Hall and the marketplace. These objects became the main magnets, another reason to live in this part of the city. In the 15th century, another Vilnius community, the Jews, began to settle beside the street. The peak of the development of Pilies Street was the construction of the city's defensive wall in the first quarter of the 16th century. At that time a large reorganisation in the urban system occurred and the

wet places were drained. All of that created conditions to straighten and extend Pilies Street and make it even more convenient and attractive for human activity. Since the 16th century, a steady increase in housing density can be seen around the street. In this way it became the city's dominant, representative street, which is well reflected in later written sources. Nevertheless, the conducted investigation shows that the road's significance was already appreciated earlier. The street's evolution was not a momentary event. It grew and became ever more significant over a long period of time from the first half of the 14th century. And one of the street's initial development stages is marked by the formation of two Christian suburbs on both sides of it. The history of Pilies Street is inseparable from the people and communities which existed beside it. The street formed as an everyday part of the life of the city's residents and the everyday needs inevitably contributed to the special features of its development. All of the circumstances came together so that Pilies Street would become the city's predominant communications artery.

Bibliography

Astrauskas, Audrius. *Vilnius, Mėsinių g. buv. namo Nr. 11/8 vietoje vykdytų žemės kasimo darbų archeologinės priežiūros ir archeologinių tyrinėjimų ataskaita. Pirmas etapas.* (The report of Archaeological Surveillance and Archaeological Investigations on former house at Vilnius, Mėsinių st. no. 11/8. First stage.) Archaeological Report. Vilnius: The Lithuanian Institute of History, Manuscript Section, File No. 1587, 1988.

Baronas, Darius. *Vilniaus pranciškonų kankiniai ir jų kultas XIV – XX a.* (Franciscan martyrs of Vilnius and their cult in the 14th - 20th centuries.) Vilnius: Aidai, 2010.

Baronas, Darius and Stephen C. Rowell. *The Conversion of Lithuania. From Pagan Barbarians to Late Medieval Christians*. Vilnius: The institute of Lithuanian Literature and Folklore, 2015.

Baubinienė, Aldona, Regina Morkūnaitė, Daumantas Bauža, Gediminas Vaitkevičius, and Rimantas Petrošius. "Aspects and Methods in Reconstructing the Medieval Terrain and Deposits in Vilnius." *Quaternary International* 386 (2015): 83-88.

Bėčienė, Idalija. *Vilniaus rotušė, Didžioji g. 31 žvalgomieji architektūriniai tyrimai.* (Vilnius City Hall, Didžioji str. 31 exploratory architectural research.) Architectural Investigations Documentation. Vilnius: Vilnius Regional State Archives, Fund 2, File No. 719, 1995.

Bešėnienė, Danutė. *Vilnius, teritorijos tarp Stiklių gatvės ir Stiklių skg. žvalgomųjų archeologinių tyrimų ir žemės kasimo darbų priežiūros bei fiksacijos ataskaita.* (Vilnius, report on the archaeological research and excavation work at territories between Stiklių Street and Stiklių backstreet.) Archaeological Report. Vilnius: The Lithuanian Institute of History, Manuscript Section, File No. 472, 1978.

Bruyen Georg and Frans van Hoogenbergh. *Plan of the City of Vilnius*. *Orbium Praecipuarum Totius Mundi. Liber Tertius. Colonia Agripina, 1.* 59. 1581.

Čaplinskas, Antanas Rimvydas. *Vilniaus gatvių istorija. Valdovų kelias. Antra knyga. Didžioji gatvė.* (History of Vilnius streets. The Royal Road. The second book. Didžioji Street.) Vilnius: Charibdė, 2002.

Čaplinskas, Antanas Rimvydas. *Vilniaus gatvių istorija. Pilies gatvė.* (History of Vilnius streets. Castle Street.) Vilnius: Charibdė, 2005.

Drėma, Vladas. *Dingęs Vilnius.* (The Lost Vilnius.) Vilnius: Vaga, 1991.

Dzikas, Liudvikas. *VVU kiemuose vykdytų mechanizuotų žemės kasimo darbų archeologinės priežiūros ir fiksacijos ataskaita.* (Report on archeological supervision of mechanized excavation works carried out in the courtyards of Vilnius University.) Archaeological Report. Vilnius: The Lithuanian Institute of History, Manuscript Section, File No. 649, 1979.

Frick, David. *Kith, Kin and Neighbors. Communities and Confessions in Seventeenth-century Wilno.* London: Cornell University Press, 2013.

Fürstenhoff, Johann Georg Maximilian. *Plan von der Stadt Wilda oder Willna in Littauen.* (Plan of the City of Wilda or Wilna in Lithuania.) 1737.

Girlevičius, Linas. *Gynybiniai įrenginiai XIV–XVIII a. Vilniuje.* (Fortifications in Vilnius in the 14th – 18th centuries.) Doctoral Thesis. Vilnius, 2008.

Jonaitis, Rytis. *Vilniuje, senojo miesto vietoje (A1610K1), Rotušės a. ir jos prieigų, 2006 m. vykdytų archeologijos tyrimų ataskaita.* (Archaeological report on the research carried out in Vilnius, on the site of the Old Town (A1610K1), Rotušės square and its surroundings in 2006.) Archaeological Report. Vilnius: The Lithuanian Institute of History, Manuscript Section, File No. 5143, 2006.

____. "Civitas Rutenica in Early Vilnius in the 14th and 15th Centuries. The Socio-cultural Aspect." *Archaeologia Baltica* 18 (2012): 256-269.

____. *Civitas Rutenica Vilniuje XIII – XV a.* (Civitas Rutenica in Vilnius in the 13th – 15th centuries). Doctoral Thesis. Klaipėda University, 2013.

Jonaitis, Rytis and Irma Kaplūnaitė. "The Excavation at Bokšto St. 6, Vilnius." *Archaeological Investigations in Independent Lithuania 1990 – 2010* (2012): 156-159.

____. "Panašūs ar skirtingi? Dvi krikščioniškos bendruomenės pagoniškame Vilniuje." (Similar or different? Two Christian Communities in Pagan Vilnius.) *Acta Historica Universitatis Klaipedensis* XXXIII (2016): 73-95.

____. *Senkapis Vilniuje, Bokšto gatvėje. XIII – XV a. laidosenos Lietuvoje bruožai.* (The old Cemetery on Bokšto Street in Vilnius: 13th–15th-Century Funeral Features in Lithuania.) Vilnius: Lietuvos Istorijos Institutas, 2020.

Jučienė, Irena. *Žvalgomųjų archeologinių tyrimų už šiluminių tinklų trasos (Muziejaus g. – Bokšto g., einančios į Paupio – Rasų rajoną) atkarpa nuo Vilnelės iki A. Vienuolio mokyklos ir ties Dailės muziejumi, ataskaita.* (Report on the exploratory archeological research behind the heating network route (Muziejaus str. - Bokšto str., Paupio - Rasų district) section from Vilnelė to A. Vienuolis School and at the Art Museum.) Archaeological Report. Vilnius: The Lithuanian Institute of History, Manuscript Section, File No. 1058, 1976.

Kandrotas, V. (Ed.) *Įdomiausios kelionės po Lietuvą. Kelionių žinynas.* (The most interesting trips around Lithuania. Travel guide.) Vilnius: Terra Publica, 2017.

Kaplūnaitė, Irma. *Vilniuje, senojo miesto vietoje (A1610K1), Rotušės a. ir jos prieigose, 2007 m. vykdytų archeologijos tyrimų ataskaita.* (Archaeological report on the research carried out in Vilnius, on the site of the Old Town (A1610K1), Rotušės square and its surroundings in 2007.) Archaeological Report. Vilnius: The Lithuanian Institute of History, Manuscript Section, File No. 4933, 2007.

____. *Vilniaus miesto katalikiškoji dalis XIV – XVI amžiaus pradžioje.* (The Catholic section of Vilnius in the 14th and beginning of the 16th century.) Doctoral Thesis. Klaipėda University, 2015.

Kaplūnaitė, Irma and Rytis Jonaitis, Rytis. "Numizmatiniai ir sfragistiniai radiniai iš Rotušės aikštės." (Numismatic and Sphragistic Finds in Vilnius Town Hall Square.) *Numizmatika* 6 (2009): 79-88.

Kaplūnaitė, Irma and Fumito Tomoi. "Bokštiniai namai Vilniuje." (Tower Houses in Vilnius.) In *Miestų praeitis 2*, edited by G. Vaitkevičius. 2010. Retrieved from: http://senas.istorija.lt/html/mts/mp2/scr/06.htm. [Accessed 20 February 2020.]

Katalynas, Kęstutis. *Vilniaus plėtra XIV–XVII a.* (Development of Vilnius in the 14th – 17th centuries.) Vilnius: Diemedžio leidykla, 2006.

Kirkoras, Adomas Honoris. *Pasivaikščiojimai po Vilnių ir jo apylinkes.* (Walking around Vilnius and its surroundings.) Vilnius: Mintis, 1991.

Kuzmickas, Algis. *Archeologiniai tyrimai Vilniuje, Pilies g. 24. Ataskaita. T. 1.* (Archaeological research in Vilnius, Pilies str. 24. Report. Vol. 1.) Archaeological Report. Vilnius: The Lithuanian Institute of History, Manuscript Section, File No. 2404, 1995.

Limanowski, Mieczysław. "Najstarsze Wilno." (The Oldest Vilnius.) *Wilno i ziemia Wilenska t. 1* (1930): 127-143.

Lisanka, Albertas. *1976 – 1977 m. Vilniaus m. Universiteto kiemuose vykdytų inžinerinių-geologinių žemės darbų archeologinės priežiūros ir fiksacijos ataskaita.* (Report on the archaeological supervision of engineering-geological earthworks carried out in the city of Vilnius University courtyards in 1976 – 1977.) Archaeological Report. Vilnius: The Lithuanian Institute of History, Manuscript Section, File No. 722, 1979.

Lowmianska, Maria. *Wilno przed najazdem Moskiewskim 1655 roku.* (Vilnius before the Moscow invasion of 1655.) Wilno: Magistrat m. Wilna, 1929.

Luchtanienė, Daiva. *Vilniaus senojo miesto vietos (1610 K1), Šv. Ignoto g. 9 Vilniaus mieste archeologinių tyrinėjimų 2002 metais ataskaita.* (Territory of Vilnius Old Town (1610 K1), St. Ignoto Str. 9, Report of Archaeological Research in 2002.) Archaeological Report. Vilnius: The Lithuanian Institute of History, Manuscript Section, File No. 3972, 2003.

Makowski, Tomasz. *Vilniaus miesto panorama.* (Panorama of Vilnius city.) Ofortas, 1600.

Marburgietis, Vygandas. *Naujoji Prūsijos kronika.* (The New Prussian Chronicle.) Vilnius: Vaga, 1999.

Meilus, Elmantas. "Rusų okupacinė valdžia Vilniuje 1655–1661 m." (Russian occupation authority in Vilnius in 1655–1661.) In *Lietuva ir jos kaimynai: nuo normanų iki Napoleono: Prof. Broniaus Dundulio atminimui*, edited by I. Valikonytė, 278-295. 2001.

Morelowski, Marian. *Vilnius prieš 1655 metus. Rekonstrukcinio plano 318 numerių paaiškinimas*. (Vilnius until 1655. Explanation of 318 numbers of the reconstruction plan.) Vilnius, 1940–1942.

Morkūnaitė, Regina, Aldona Baubinienė, Gediminas Vaitkevičius, and Daumantas Bauža. "Geografinė-istorinė gamtinių sąlygų interpretacija Vilniaus miesto kūrimosi ir plėtros eigai atkurti." (Geographical-historical interpretation of natural conditions to restore the course of Vilnius city formation and development.) *Geologijos Akiračiai*, no. 3 (2015): 15-22.

Paknys, Mindaugas. *Vilniaus miestas ir miestiečiai 1636 m.: namai, gyventojai, svečiai.* (Vilnius City and Citizens in 1636: houses, residents, guests.) Vilnius: Vilniaus Dailės Akademijos Leidykla, 2006.

Patkauskas, Stasys. *1978 m. archeologinių tyrimų Vilniuje, Universiteto g. Nr. 1/2 ataskaita.* (Report of the archeological research in Vilnius, Universiteto str. No. 1/2 in 1978.) Archaeological Report. Vilnius: The Lithuanian Institute of History, Manuscript Section, File No. 647, 1979.

____. *Vilnius, Muziejaus g. 6, 8, 10. Archeologinių tyrimų ataskaita.* (Vilnius, Muziejaus str. 6, 8, 10. Archaeological Research Report.) Archaeological Report. Vilnius: The Lithuanian Institute of History, Manuscript Section, File No. 1446, 1986.

Poška, Tauras. *Archeologijos tyrinėjimai Vilniuje, Stiklių g. 7, 7a 2001 m. Ataskaita.* (Archaeological research in Vilnius, Stiklių st. 7, 7a in 2001. Report.) Archaeological Report. Vilnius: The Lithuanian Institute of History, Manuscript Section, File No. 3716, 2001.

Pukienė, Rutilė. "Mediniai XIV a. kelio grindiniai Vilniaus žemutinėje pilyje. Dendrochronologinė analizė ir datavimas." (Wooden road Pavements of the 14th century in the Vilnius Lower Castle. Dendrochronological Analysis and Dating.) *Vilniaus žemutinė pilis XIV a. – XIX a. pradžioje. 2005 – 2006 m. tyrimai* (2007): 182-194.

Puškorius Arūnas. *Vilniaus rotušės aikštėje ir jos prieigose 2005 m. vykdytų archeologijos tyrimų ataskaita (rankraštis).* (Archaeological report on the research carried out in Vilnius town hall square and its surroundings in 2005.) Archaeological Report. Manuscript. 2005.

Rowell, S. E. (Ed.) *Gedimino laiškai. Chartularium Lithuaniae res gestas magni ducis Gedeminne illustrans.* (The Letters of Gediminas. *Chartularium Lithuaniae res gestas magni ducis Gedeminne illustrans.*) Vilnius: Vaga, 2003.

Sarcevičius, Saulius. *1999 m. Vilniuje, Pylimo–Rūdninkų gt. kampe, šalia miesto gynybinės sienos vykdytų archeologijos tyrimų ataskaita.* (Report of an archeological survey carried out in 1999 in Vilnius, in the corner of Pylimo – Rūdninkų st., near the city's defensive wall.) Archaeological Report. Vilnius: The Lithuanian Institute of History, Manuscript Section, File No. 3346, 1999.

____. *1999 m. Vilniuje, Visų Šventųjų gt. Nr. 5-4 žvalgomųjų archeologinių tyrimų ataskaita.* (Report of Exploratory Archaeological Research in Vilnius, Visų Šventųjų Str. No. 5-4.) Archaeological Report. Vilnius: The Lithuanian Institute of History, Manuscript Section, File No. 3364, 2000.

Sarcevičius, Saulius, Oksana Valionienė and Virginijus Pugačiauskas. *Kreivoji pilis: tarpdisciplininių tyrimų atvejis.* (The Crooked Castle: A Case of Interdisciplinary Research.) Vilnius: Lietuvos Istorijos Institutas, 2016.

Schofield, John and Alan Vince. *Medieval Towns. The Archaeology of British Towns in Their European Setting.* London: Equinox, 2003.

Stankus, Jonas. *Archeologinių tyrinėjimų Vilniaus senojo miesto vietos su priemiesčiais (A1610K2), Šv. Mykolo g. Nr. 12, buto Nr. 1 būsimame rūsyje, 2002 m. ataskaita.* (Report of Archaeological research in 2001 in Vilnius Old Town with suburbs (A1610K2), St. Mykolo Str. No. 12, in the future basement of apartment no. 1.) Archaeological Report. Vilnius: The Lithuanian Institute of History, Manuscript Section, File No. 3942, 2003.

Tamošiūnienė, I., B. R. Vitkauskienė, and A. Žilevičiūtė (Eds.) *Vilniaus miesto planai.* (Vilnius City Plans.) Vilnius: Lietuvos Nacionalinis Muziejus, 2016.

Tebelškis, Povilas. *Žemės kasimo darbų, vykdytų pastato Stiklių gt. Nr. 7 remonto-restauracijos metu archeologinės priežiūros ir fiksacijos ataskaita.* (Report of Archaeological excavations carried out during the repair-restoration works on the building in Stiklių Str. No. 7.)

Archaeological Report. Vilnius: The Lithuanian Institute of History, Manuscript Section, File No. 642, 1979.

Ušinskas, Vytautas. *Valstybinio Jaunimo Teatro priešscenis Vilniuje, Biržų g. Nr. 2 (Arklių g. Nr. 5). Inžinerinių-geologinių tyrimų archeologinės priežiūros ir fiksacijos ataskaita.* (Pre-stage of the State Youth Theater in Vilnius, Biržų str. No. 2 (Arklių st. No. 5). Report on archaeological supervision during engineering-geological research.) Archaeological Report. Vilnius: The Lithuanian Institute of History, Manuscript Section, 1978.

Vailionis, Evaldas. *Vilniaus senamiesčio (AR 5 a, c), Šv. Mykolo g. 10 2000 m. archeologinių žvalgomųjų tyrimų ataskaita.* (Archaeological survey report of Vilnius Old Town (AR5a, c), St. Mykolo g. 10 in 2000.) Archaeological Report. Vilnius: The Lithuanian Institute of History, Manuscript Section, File No. 3805, 2002.

Vainilaitis, Valdas. *2002 m. archeologijos tyrimai tarp Ašmenos, Mėsinių, Dysnos gatvių Vilniuje.* (Archeological research between Ašmena, Mėsinių, Dysnos streets in Vilnius in 2002.) Archaeological Report. Vilnius: The Lithuanian Institute of History, Manuscript Section, File No. 3961, 2003.

Vaitkevičius, Gediminas. *Valstybinis Dailės institutas Vilniuje, Maironio g. 6. Vykdytų archeologinių tyrimų (1986–1987 m.) ataskaita.* (State Art Institute in Vilnius, Maironio str. 6. Report on the archaeological research (1986-1987).) Archaeological Report. Vilnius: The Lithuanian Institute of History, Manuscript Section, File No. 1585, 1988.

____. *Vilniaus įkūrimas (Vilniaus sąsiuviniai t. I).* (The Establishment of Vilnius (Vilnius Notebooks Vol. I).) Vilnius: Lietuvos nacionalinis muziejus, 2010.

Vaitkevičius, Gediminas and Milda Lidija Kiškienė. "Kreivasis miestas." (The Crooked Town.) In *Miestų Praeitis 2,* edited by G. Vaitkevičius. Retrieved from: http://senas.istorija.lt/html/mts/mp2/scr/06.htm. [Accessed 20 February 2020.]

Valionienė, Oksana. *Vilniaus erdvinė raidos struktūra viduramžiais.* (The Spatial Development structure of Vilnius in the Middle Ages.) Doctoral Thesis. Klaipėda University, 2015.

____. *Viduramžių Vilniaus erdvės evoliucija (XIII a. vidurys – XVI a. pirmas ketvirtis).* (Medieval Vilnius: Evolution of a space (Mid-13th–first quarter of the 16th centuries).) Vilnius: Lietuvos Istorijos Institutas, 2019.

Žvirblys, Atas. *Vilniuje, Visų Šventųjų 5–1, 2010 m. archeologinių tyrimų ataskaita.* (Report of archaeological research in Vilnius, All Saints Str. 5–1, in 2010.) Archaeological Report. Vilnius: Lithuanian National Museum Archive, File No. 766, 2011.

Инвентарь и реестры Митрополитальной юрисдики в Вильне. (Inventory and registers of Metropolitan jurisdiction in Vilnius.) Saint Petersburg Institute of History Archive, Fund. 52, File No. 206, 1672.

Крачковский, Юлиан Фомич. "Православныя свяыни города Вильны." (Orthodox shrines in the city of Vilnius.) *Труды девятаго археологическаго съезда въ Вильне 1893* (1897): 223-250.

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Wanted: A Date with Herodotus

By Oliver R. Baker[*]

Herodotus comes down to us as the father of history and his fifth-century work, the Histories, is recognized as the first in an entirely new literary genre. But mid-fifth-century historiography is missing one of the most convenient of supranational tools—a reliable dating grid, or calendar—and Herodotus simply must make do as best he can without one. Although it was first suggested by a sixth-century Scythian monk, the axis of time along the now familiar BC/AD system is of comparatively recent adoption. Partly because of bitter doctrinal disputes over when Jesus of Nazareth was born—this system is never widely accepted until a seventeenth-century Jesuit scholar suggests that Anno Domini year one is just a convenient convention and by no means an agreement. When reading Herodotus today, particularly in an annotated edition in translation providing scholarly estimates of the Julian dates for the events under discussion, it is only too easy to be blissfully unaware of the author's extreme dating handicap

Introduction

Just as there is no Archaic or Classical Greek word for biography, there is no word in Classical Greek or Latin for date—I mean a numerical, supranational, chronological date as in the children's nursery rhyme, "In sixteen-hundred and sixty-six, London Town was burnt to sticks."[1] This is a massive challenge to Herodotus and to all of his ethnically diverse oral sources in the Eastern Mediterranean when trying to tell him when something happened—how do they date events and communicate them to others? The simple answer is that they must rely on synchronicities—if they can find a pair that fits. When reading Herodotus today, particularly in an annotated edition that provides scholarly estimates of the Julian dates for the events under discussion, it is only too easy to be blissfully unaware of the author's extreme handicap. Using synchronicities is not quite the same as trying to count from one to five when your vocabulary extends to only: one, two, three, another, and another—but you get the idea. Long winded little rhymes such as, "When Themistocles' archonship was over and done; Miltiades sailed to Athens on the run" can never tell us much about exactly

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1. Conspiracy theorists continue to delight in what is to them the obvious evil *omen* that when this date is given in Roman numerals—the one thing we know for certain is that the Romans never did—MDCLXVI—we see all of their numerals in descending order of magnitude. Something very *bad* was certain to happen to someone somewhere during *that* year—such is the power of prophecy, superstition, and omen. Mnemonics such as: "I Value eXcesses, Let Caesar Destroy Mountains" may help.

when he sailed as the one that runs "In fourteen hundred and ninety-two, Columbus sailed the ocean blue."[2]

Although Julius Caesar, like Herodotus an avid Egyptophile but of a somewhat different ilk, gives the Western world a calendar that actually works—albeit one likely adapted from the one used by the Egyptians for centuries beforehand—Caesar does not take it any further.[3] Once the Romans get their seasonal year to match their festival year they are happy enough to use the conciliar year as their identification grid throughout their empire.[4] At least they move away from the Archaic Greek luni-solar system of 354-day years with somewhat capriciously intercalated 384-day years every two or three years by doubling one of the months. The Romans also get their New Year to start shortly after the winter solstice; before then everyone's New Year started on different days throughout the year, but usually one related to an important civic or religious festival, in turn related to an equinox or solstice.

Supranational Dates

But fixing the calendar—which incidentally makes celebrating birthdays and anniversaries possible—does not give the Romans a convenient system of supranational chronological dates; they retain the system with which they were familiar despite its clumsiness and obvious defects. One example from the second century of the Roman Empire will suffice to illustrate this. One of the more reliable surviving histories of Alexander the Great the *Anabasis of Alexander* was compiled in Attic Greek by the prodigious writer Lucius Flavius Arrianus of Nicomedia, who is more commonly known as Arrian.[5] He describes Alexander's succession to the Macedon throne as follows:

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2. Not only are Archon lists for the sixth and fifth centuries incomplete, many of the entries are contradictory. Furthermore, the appointments span two of our Julian years running from July until June. So Themistocles' term as chief magistrate, (*eponymous archon*) runs 493/492; and his term is followed by that of Diognetus 492/491, Phoenippus 491/490, and so on.

3. Denis Feeney, *Caesar's Calendar* (Berkeley, CA: University of California Press, 2007), 42.

4. Using the Julian calendar reforms of the late first century, the usual dates for the solstices are between June 20/21 and December 21/22, and for the equinoxes March 20/21 and September 22/23. However, over a four-hundred-year cycle, the vernal equinox can fall as early as March 19 and the autumnal equinox as late as September 24. No matter, the Julian calendar with sixteenth-century Gregorian reforms at least narrows down the dates of these celestial events to one of three possible days in the four months of interest. But even today, if you want to do something special on say the first day of spring, rather than guess and only get close, you will have to look it up from a reliable source.

5. Arrian of Nicomedia (c. 86/89-c. 140/160), a Greek historian, public servant—serving variously as senator, consul, archon, and priest, military commander, and philosopher, was

> Now we are told that the death of Philip occurred in the archonship of Pythodelus at Athens; then about twenty [years old], Alexander succeeded, as Philip's son, and arrived in the Peloponnesus (Arr., *Anab.* 1.1.1).

When he comes to describing Alexander's death, Arrian writes:

> Alexander died in the hundred and fourteenth Olympiad and the Archonship of Hegesias at Athens. According to Aristobulus, he lived thirty-two years and eight months; his reign lasted twelve years and the same eight months (Arr., *Anab.* 7.28.1).

Should any of Arrian's many contemporary readers not have a list of Athenian archonships readily to hand they would just be left with the notion that Alexander III's short rule was quite some time ago; but not quite sure about how long ago? Of course, modern historians with access to many other documents and a supranational grid, are happy to inform us that Alexander III was born in 356 (probably in October), succeeded to the Macedon throne in October 336—the exact date of Philip's assassination was either not recorded, or has been lost—and that he died on the 10th or 11th of June, 323 BCE. The amount of archival sifting to reliably generate Alexander's date of death is likely mind-boggling.

Before Christ and Anno Domini

The axis of time along the now familiar BC/AD line is comparatively recent and its conception is generally attributed to the sixth-century Scythian monk Dionysus Exiguus [c. 470-c. 544]. Indeed the Dionysian Anno Domini system is used in the mid-eighth century by the Venerable Bede to date some events when he is compiling his *Ecclesiastical History of the English People*.[6] Partly because scholars could never agree on the year of Christ's birth, let alone a particular month and day, it is not until AD 1627 that the Jesuit scholar Dominicus Petavius seriously proposes the BC/AD system as the basis for a universal time-line for scholars and historians. He gets around the indeterminacy of an actual date for Jesus of Nazareth's birth by proposing that AD year one is simply a reference point—a convenient convention—but not a verifiable, let alone an agreed year for the event. [7] However, despite its obvious convenience for future and past events,

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one of the most distinguished and prolific authors of the second-century Roman Empire. Of his many known works the *Indica* and *Anabasis* have survived intact, the remainder of his works are extant only in fragments.

6. Feeney, *Caesar's Calendar*, 2007, 2-3.

7. Note that the abbreviation AD always precedes the year number, whereas for the secular systems BCE and CE always follow the year number.

Petavius' pre-set numerical grid does not come into universal acceptance until the eighteenth century.[8]

Establishing Synchronicities

Just how difficult it is to establish, let alone describe, a reliable chronology of events in the sixth and fifth centuries is illustrated by an anecdote about Xenophanes of Colophon (c. 570/560-478) who asks at a dinner, "How many years do you have my good man? How old were you when the Mede came?" In Julian terms, we now surmise that Xenophanes is talking about an event in Anatolia that occurred in 546/45.[9] However, even today we often organise our thinking and recollections in terms of a striking event—for example, most of us can remember exactly where we were and what we were doing when two hijacked passenger aircraft were flown into the twin towers of the World Trade Center in New York City. Otherwise, for many of us, there would be no reason to remember anything about that particular Tuesday morning on 11 September, 2001. For many, the popular abbreviation of the date—9/11—signifies the event. [10] In antiquity, even getting the right day is not very easy; unlike the Egyptians who start their new day at sunrise, the Greeks start their new day at sundown, whereas the Persians start theirs at midnight.[11]

Of all ancient calendar systems those adopted by the Greeks are the most confusing even to Greeks at the time. They share a basic similarity from region to region as they are all luni-solar, but each city-state keeps its own version of a twelve-month calendar with a periodic intercalation of a thirteenth lunar-month. The Athenian or Attic calendar, despite being mired in mystery, is still the best

8. Until comparatively recently Parliamentary statutes in the United Kingdom were identified using only regnal years, as in: 2 Geo. 6 for an Act receiving royal assent over the period 11 December 1937 to 10 December 1938, and so on.

9. We know from Homer that the Lydians, whom he calls the Meiones (Maeonians), led by Mestheles and Antiphos, fought with the Trojans during the Trojan War (Hom., *Il* 2.864). Cyrus the Great besieged and captured the Lydian capital Sardis in 546; a year later the last Lydian king, Croesus, was dead. Admittedly confusing, but during the sixth century the terms Mede and Persian were often used interchangeably.

10. Remember that in the United States the date format is month-day-year—a convention of no great consequence until the month is abbreviated to a numeral and the year dropped. Ambiguity really dominates when the year is also abbreviated from four digits to two and the reader is then unsure whether the given date format is YY MM DD, YY DD MM; MM DD YY, MM YY DD; DD MM YY or DD YY MM.

11. See Benjamin Meritt, *The Athenian Year*. Sather Classical Lectures, volume 32 (Berkeley and Los Angeles, CA: University of California Press, 1961), 22. The Hebrews also started their new day at sunset. Although the Julian day started at midnight, the Roman Church followed Greek/Hebrew tradition until well into the nineteenth-century.

known and most intensively studied. The intercalary month usually comes after the sixth month, *Poseidon*, and is called *Second Poseidon*. *Hekatombion*, the first month, and hence the beginning of the year, falls in the summer after the summer solstice.[12] Other Greek city-states and regions start their New Year on different days; for example, Sparta and Macedon start theirs following the autumnal equinox, whereas Delos starts theirs following the winter solstice. Coming from Halicarnassus, which would have Dorian, Ionian, and Carian influences, we should not be surprised that Herodotus finds the Athenian calendar baffling.

Another Golden Rule: Always Blame the Athenians

For the historian inclined toward tidy orderliness, the regrettable fact is that the Athenians were stubbornly unwilling to adopt anything resembling a completely regular calendar, which makes reconstruction difficult. Their irregularity is not from lack of astronomical knowledge. In 432, the Athenian astronomer Meton instituted his nineteen-year cycle, fixing regular intercalations—whether Meton got this cycle from Babylonia or discovered it himself is not known. From that point onward, a small group of Greek astronomers use the Metonic cycle in their calculations, but this should be regarded as an astronomer's ideal calendar. Abundant epigraphical evidence demonstrates that in the civil calendar, while the archons inserted approximately the correct number of intercalary months over the long term, the specific corrections are somewhat arbitrary, inserted as the archons saw fit. This irregularity does not really affect the long-term workings of the calendar, but it does make things very confusing when trying to establish a precise date for an event. The Athenians seem to have taken a rather casual attitude toward their calendar. It appears they used neither a regular formula nor continuous direct observation to determine the length of the months. Most likely, they followed a general rule of alternating months (twenty-nine and thirty days long), subject to periodic correction by observation.

In addition to this calendar, which has been called the festival calendar, Athenians maintained a second calendar for the political year. This conciliar year divided the year into *prytanies*, one for each of the *phylai,* the subdivisions of Athenian citizens. The number of *phylai*, and hence the number of *prytanies*, varies over time. Until the end of the fourth century there were ten *phylai*. After that the number varies between eleven and thirteen, but usually twelve. Even more confusing, while the conciliar and festival years are basically the same length during the fourth century, such is not regularly the case in the fifth century.[13]

12. See Meritt, *The Athenian Year*, 1961, chapter ten for a discussion of the seasonal year and the conciliar year which began about midsummer and thus the epochal date depends on the summer solstice, 202-203, 216.

13. See Meritt, *The Athenian Year,* 1961, 135-137, 213-214.

Luni-Solar Chaos

Ordinary records of Greek city-states are dated according to the eponymous year of the person in power, be that the archon, ephor, king, priest of Hera, and so on. Unfortunately, for Athens, the list of archons is incomplete for the fifth century. Moreover, regional eponymous years are difficult to use when trying to correlate the various eras, a problem no less evident to the ancient Greek historians than it is to us. Late in the fifth century, Meton of Athens noticed something that the Babylonians had recognised since the sixth century or much earlier, that two hundred and thirty-five lunar months made up almost exactly nineteen solar years. Using modern measurements for the length of the solar year and the lunar month, the arithmetic is trivial:

19 x 365.2425 = 6,939.6075 days (or about 6,940 days), and

6,939.6075 ÷ 29.53059 = 234.9973 months (or about 235 months)

Now everyone knows that the twelve-month lunar year—approximately 354 days—falls short of the solar year by just over eleven days. They also know that the lunar month is not exactly twenty-nine days long and that it varies in length. Accordingly, they had six *full* months of thirty days and six *hollow* months of only twenty-nine days, giving them a 'short' year.[14] Consequently, the archons would somewhat capriciously insert a thirteen-month 'long' year of 384 days from time to time to keep their calendar in step with the seasons. And so in the sixth century—using neither the *metonic* cycle, nor the *octaeteris*—and in the early fifth century Athenians would repeat one month, usually the sixth month, Poseidon.[15] But there was no prescribed rule for this intercalation and it is left up to the archon to decide. They do not even have a special name for this thirteenth month. Even after Meton's observations became well-known, his regular system of seven intercalary years in every nineteen-year cycle is not scrupulously followed by the archons.[16] But more confusion is to come as soon as Herodotus starts to inquire about events outside of Attica.

14. For the arithmetically challenged 6 x 30 = 180 and 6 x 29 = 174 (180 + 174 = 354).

15. The *octaeteris* comprises an eight-year cycle of 99 lunar months, where three of the eight years are thirteen full lunar months long.

16. Again the arithmetic is trivial 7 x 384 = 2,688 and 12 x 354 = 4,248 (2,688 + 4,248 = 6,936 which is only a few days short of the actual 6,939.6075 which was rounded up to 6,940). .

Although most of the calendars follow the same principles, virtually every fifth-century Hellenic city-state uses its own calendar with different month names, different beginnings to the year, and different intercalations. The Hellenes use luni-solar calendars with years of twelve or thirteen months. A month could be 'hollow' or 'full' having either twenty-nine or thirty days respectively. Intercalations seem to have been done as needed and arbitrarily. In any case there is no fixed pattern although several cycles were known to the Hellenes. According to Robert Hannah by the late fifth century the Athenians more or less follow the scheme developed by Meton of Athens and his colleagues. He writes:[17]

> So over a period of nineteen years there were 6,940 days or 235 months, including seven intercalary months. Of the 235 months, the Greeks made 110 'hollow' (in other words, of 29 days each), and the remaining 125 'full' (of 30 days each). The imbalance between 'full' and 'hollow' months means that they cannot [simply] alternate throughout the cycle, but sometimes there would be two 'full' months in succession. Geminos—a first century mathematician—explains how the devisers of the cycle arrived at 110 'hollow' months: all 235 months are initially assigned 30 days each, which gives a total of 7,050 days to the 19-year period. [18] This overshoots the sum of 6,940 days of 235 lunar months by 110 days, so 110 months must each have one day omitted through the cycle, and they become 29-day months. To ensure as even a distribution of this omission as possible, he says that the Greeks divided the 6,940 days by 110 to get a quotient of [about] 63, so that the 110 days were removed at intervals of 63 days.

The years are named after the holder of a certain office whose term lasts one year. For Athens this is one of the archons, in Sparta one of the ephors. The twelve months of a common year bear different names from city to city. For most of the Greek and non-Greek city-states, neither all the names nor the exact sequence of the months are known, and often neither the beginning of the year, nor the name of the intercalary month. The diversity is astonishing.

Athenian Calendars

There were several calendars in use in Athens. The most important was the civil calendar. The beginning of each month in theory is determined by observation, in effect the day of the first visibility of the waxing crescent in the evening and

17. Robert Hannah, *Time in Antiquity* (London: Routledge, 2009), 35.

18. Actually Geminos' arithmetic is not quite right; this works better if the omitted day is every sixty-fourth one. But Herodotus is compiling and writing his *Histories* several decades before Meton and so he is obliged to follow a somewhat more capricious calendar where the adjustments are ultimately directed by the Archon.

becomes the first day of the month.[19] This calendar is subject to manipulations by the Archons. There is even evidence of single days being repeated several times.[20] They might even add a few days to one month—perhaps to favour a festival with better weather—and subtract a few days from the next. Thus, due to intercalations for political rather than astronomical reasons, this calendar can be out of step with the actual seasons. Another calendar is the prytany calendar which is used to regulate the execution of certain offices by representatives of one of the so-called tribes. In the fifth century this calendar comprised ten months of thirty-six days, which ensures that it was always out-of-step with both the civil calendar and the seasonal or astronomical one.

And Elsewhere in the Hellenic World

We know almost nothing about the calendar used in Delphi. As in Athens, they may well have utilised more than one system. Even the actual names of the months used during the fifth century are uncertain. Scholars believe that Delphi took their New Year, like Athens, with the first new moon after summer solstice, either by calculation or from the first visibility of the thinnest of slivers of the waxing crescent moon. We know the names and sequence of months used in Boeotia from the fifth century onward, and that they are different from those used in Attica. However, scholars believe that the Boeotian New Year begins around the winter solstice. The sequence and names of the months in Miletus in Anatolia are known, but again they differ from those used in Attica. Their year begins after the autumnal equinox, possibly with the first visibility of the waxing crescent of the new moon. Our knowledge of the Spartan calendar is exceedingly limited. We know their names for only nine of the twelve months, and scholars have been unable to reconstruct a complete sequence. Nor do scholars know their mode of intercalation, which likely lay in the hands of the ephors. It is believed that the

19. The Athenian New Year starts on the first new moon following the summer solstice. The names of the twelve Athenian months along with their Julian equivalents are as follows. The first month of the Attic New Year is always *Hekatombion*, and the last month always *Skirophorion*:

Hekatombion	July/August	*Gamelion*	January/Feb
Metageitnion	August/September	*Anthesterion*	February/Mar
Boedromion	September/October	*Elaphebolion*	March/April
Pyanepsion	October/November	*Mounichion*	April/May
Miamakterion	November/December	*Thargelion*	May/June
Poseidon	December/January	*Skirophorion*	June/July

20. In those years with thirteen lunar months the sixth month is repeated simply as *Second Poseidon*.

Spartan New Year begins on the first new moon following the autumn equinox. These differences in when the New Year is celebrated make for difficulties when we transpose the date of an event into Julian terms.[21]

Another Pan-Hellenic Challenge for Herodotus

Herodotus has to do what he can without a Pan-Hellenic (calendar) grid, let alone a supranational one, and we see that in book 1 of the *Histories* [22] he relies on a kings' list to map out the sequence of events in Lydia and Media—modern Turkey, Iraq, and Iran.[23] Arguably his first mention of the last Lydian king, Croesus, marks his transition from myth to history.[24] From Herodotus we know that Gyges rules for thirty-eight years.[25] His son, Ardys, rules for forty-nine years; and Ardys' son, Sadyattes, rules for the next twelve years.[26] He is succeeded in turn by Alyattes who, perhaps improbably, reigns for fifty-seven years.[27] Herodotus then describes how Alyattes' son, Croesus, then aged thirty-nine, ascends to the Lydian throne which he will hold for fourteen years before being captured when Cyrus' Persian forces besiege and take his capital, Sardis.

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21. For example, the Battle of Marathon occurs in the late summer of 480; but because the Athenian New Year is celebrated on the first new moon following the summer solstice the battle takes place early during the Athenian year 480/479, conversely because the Spartan New Year is celebrated on the first new moon following the autumn equinox the battle takes place late during the Spartan year 481/480.

22. All quotations from the *Histories* are from the Andrea Purvis translation presented in Robert Strassler, *The Landmark Herodotus* (New York, NY: Random House, 2007).

23. See Hdt 1.7.4: his estimate for regnal generations—about five per century—where he writes "they governed for twenty-two generations, five hundred and five years" is not unreasonable. In England, for example, there have been thirty-nine monarchs between the ascension of William I in 1066 and the death of George VI in 1952—an average reign of just over twenty-years, or, near enough, five generations of monarch per century. This claim is inconsistent with that made by Herodotus in 2.142.1-2. However, in book 2 of his *Histories* he focuses on demonstrating that Egyptian history extends much further back than that of the Hellenes.

24. Hdt. 1.6.1-2. From a number of sources, several authorities claim that Croesus is born circa 596 and rules from 560 to about 547–546 when his forces are defeated at the battle of Thymbra just outside of his capital Sardis by Cyrus the Great. But there is no agreement as to whether he was quietly butchered, sacrificed on a pyre, retained as an advisor, or held under house arrest; and even the date of the battle is somewhat uncertain, some suggesting that it was after the fall of Babylon in 539. Hdt 1.26.1 and 1.86.1.

25. Hdt. 1.14.4. Gyges, the former bodyguard to his predecessor Candaules, who he assassinates, founds the Mermnad dynasty early during the seventh century.

26. Hdt. 1.16.1.

27. Hdt. 1.25.1.

And so this particular dynasty in the Lydian empire comes to an end after one hundred and seventy years, absorbed by another empire.[28] But although Herodotus gives us the sequence of Lydian monarchs, he does not completely link this dynasty to events in mainland Greece or elsewhere. But, in a digression about a war between the Lydians and Medes during Alyattes' implausibly long reign, and perhaps entirely by happenstance, he mentions an eclipse of the sun, one of only three mentioned in his *Histories*.[29] If Herodotus puts in this *rabbit-into-the-hat* then just over two-thousand years later, Petavius—a remarkable polymath—pulls this same *rabbit out-of-the-hat* to show that this astronomical event and therefore the ancient battle could be reliably dated back to 28 May, 585 BC. Or could he?[30] Herodotus reports only three solar eclipses, but the one his sources claim as visible from Anatolia in the autumn of 481 did not actually occur.[31]

We can begin to see the challenge that Herodotus faces as he gathers these oral traditions and tries to distil historical fact from legend while clearly identifying what he believes to be interesting but entirely mythical tales. Donald Wilcox writes:[32]

> In fact the generations have no quantitative aspect. They exist as pure indications of *the fact of duration* (italics mine); the relation among separate generations is discontinuous and extrinsic. But Herodotus was not indifferent to progressive and continuous elements of time. Alongside this episodic chronology he also drew up a linear sequence of years leading back to the dimmest recesses of known time. By this second chronology he conveyed the temporal dimension of Greek culture in a linear fashion. These two chronologies are fundamentally different in their orientation and function, though they combine to give Herodotus' narrative a richness and subtlety it would otherwise lack. By examining the episodic and linear chronologies in turn we can see more clearly the separate functions they served in Herodotus' work.

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28. For a discussion of the challenges of generation values, see Rashid Ball, "Generation Dating in Herodotus," *Classical Quarterly* 29 (1979): 276-281. Of interest is Hdt. 1.7.4 where we learn that twenty-two generations of Heraklids govern Lydia for 505 years—roughly 23 years per generation—significantly less than the thirty-three or forty years used elsewhere in book 1 and book 2.

29. Hdt 1.74.1-2.

30. There was another total solar eclipse visible in the southern area of Anatolia on 19 May 557—some twenty-eight years later than the "Eclipse of Thales" which occurred on 28 May 585—which leads some scholars to infer that Alyattes' reign was not fifty-seven years. See Pamela-Jane Shaw, *Discrepancies in Olympiad Dating* (Stuttgart: Franz Steiner, 2003), 235. See also W. W. How and J. Wells, *Commentary on Herodotus* (Oxford, Clarendon Press, 1912), 1.1.74.2; evidently scholars differ.

31. See Eric Glover, "The Eclipse of Xerxes in Herodotus," *Classical Quarterly* 62, no. 2 (2014): 471-492.

32. Donald J. Wilcox, *Measure of Times Past* (Chicago, IL: University of Chicago Press, 1987), 54.

Wilcox overstates the case, or perhaps minimises the real challenges. Herodotus simply does not have the tools to address the two problems adequately.[33] This lack brings to mind the twelfth-century *Historia Regum Britanniae* written in Latin by the sometime bishop of St. Asaph, Geoffrey of Monmouth. He uses a curious system of synchronisms and only three Julian dates (*Anno Domini*) to give a pseudo-historical account of the history of the Britons from Brutus of Troy, the mythical late twelfth- early eleventh-century great-grandson of Aeneas, down to Cadualadrus, son of Caduallo, who he claims dies on April 20, 689.[34]

Herodotus expresses his complete dissatisfaction with the Hellenic calendar by commenting that the Egyptians are the first to employ the solar year by dividing it up into twelve months of thirty days and adding five days each year beyond that number, whereas the Hellenes attempt to preserve the timing of the seasons by inserting an intercalary lunar month every other year. The passage from Herodotus reads:

> As to all matters concerning the human world, they were in agreement. They said that the Egyptians were the first of all people to discover the year, by dividing up the seasons into twelve parts to total one year., and that they discovered how to do this from the stars. The Egyptians seem to me to be much wiser than the Hellenes in the way they regulate the timing of seasons. While the Hellenes attempt to preserve the timing of the seasons by inserting an intercalary month every other year, the Egyptians divide the year into twelve months of thirty days each and add just five days in every year beyond that number, and thus their seasons do return at the same periods in the cycle from year to year (Hdt 2.4.1).[35]

Four centuries later the Romans wisely take their calendar clues from the Egyptians, not the Hellenes.

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33. "It ain't necessarily so" with apologies to Ira Gershwin (*Porgy & Bess*, 1935). His first two dates are legendary: 156 for the death of king Lucius, and 542 for King Arthur's abdication in favour of Constantine. His third date, 689, for the death of Cadualadrus (Cadwaladr) is simply wrong; he actually dies in 682 (not 689) in Rome possibly of the plague. Geoffrey of Monmouth, "The History of the Kings of Britain: An Edition and Translation of De gestis Britonum (Historia Regum Britanniae)," in *Arthurian Studies* 69, edited by Michael D. Reeve, translated by Neil Wright (Woodbridge, England: Boydell & Brewer Press, 2007), 5.73, 11.178, 11.206.

34. The author confuses the Welsh ruler Cadualadrus / Cadwaladr with Caedwalla of Wessex who dies self-exiled in Rome in AD 689, having finally abandoned his kingdom to the seemingly never-ending Saxon invasions. Geoffrey of Monmouth, *The History of the Kings of Britain*, 2007, 11.206.

35. For a comparison between the Greek Solutions and the Egyptian Solutions to the luni-solar challenge, see How and Wells, "The History of the Kings of Britain: An Edition and Translation of De gestis Britonum (Historia Regum Britanniae)," 1912, 1.2.4.2-3.

Is Dating Even Important

Another example concerns establishing precisely when the naval battle off Salamis took place, and with it the most likely dates for the preceding land battle at Thermopylae and the naval engagements off Artemision. Quite inadvertently, with an oblique reference to a partial solar eclipse, Herodotus gives modern readers precisely what is needed to determine the date for the battle off Salamis in Julian terms.[36]

The Karneian festival, or simply the Karneia (Κάρνεια), is an important festival in honour of Apollo; held near the end of their year and just before the autumn equinox, the beginning of the Spartan New Year. This nine-day Doric harvest festival is celebrated during the late summer and the ceremonies conclude on the full moon. Scholars disagree on how the ephors determine when to hold the festivities, but it is likely that in Julian terms they would have ended on the first full moon that falls between mid-August and mid-September.

Olympiad dating is interesting and certainly Pan-Hellenic, but we must recognise that it was not established until the end of the second century. Robert Hannah writes:[37]

> The four-yearly periods of the Olympic Games formed the basis of the best-known era, that of the Olympiads, which started traditionally in 776 BC. Its invention is associated with Timaeus (c. 350-260) and Eratosthenes (c. 285-194). As the Olympic year began in mid-summer, it straddled the second half of the Julian year and the first half of the next, so that, for example the third year of the sixth Olympiad (conventionally written as Ol. 6, 3) corresponds to the Julian years 754/3 BC.

The Olympiads were not numbered until the second century when Erasthenes decided that naming the 'year' after the winner of the stadia race was inconvenient—and that taking what we now know as 776 BC (Ol. 1, 1) as the date of the first Olympiad was much easier than remembering who won, or having access to a list of winners. That winners' list was as inconvenient to use as the Athenian list of past archons or the Spartan list of past ephors. Introducing his 1975 article on the uncertainties of Olympic dating, Stephen G. Miller writes:[38]

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36. "Cleombrotus had led the army back from the isthmus because as he was sacrificing to determine what to do about the Persians, the sun was darkened in the heavens" Hdt. 9.10.3. There was a partial solar eclipse visible from Corinth on October 2, 480. Scholars can confidently work backward from this astronomical event, a reliable, and useful *terminus ante quem* (*TAQ*) for the battle off Salamis. But solar eclipses can only occur when there is a new moon (moon is between the earth and the sun).

37. Hannah, *Time in Antiquity*, 2009, 48.

38. Stephen Miller, "The Date of Olympic Festivals," *Mitteilungen des Deutschen Archaologishen Instituts* 90 (1975): 215.

> One of the greatest of the many paradoxes of classical studies must surely be that the precise date of Olympic festivals is not agreed upon. It is incredible that we do not know the date of an event which occurred with regularity for perhaps more than a millenium [sic], and which was constantly used in antiquity as a framework for time references. Much of our understanding of ancient chronology rests ultimately upon dates which are given in terms of Olympiads, and yet there is no general consensus as to the time when, every four years, the Olympic Games took place.

Miller further writes that: [39]

> The present status of scholarly opinion regarding the date of the festivals is perhaps most succinctly put by Bickerman, "the games were held every four years at the height of the summer. A more precise date is not possible."

All this, as Miller equally succinctly points out, raises the interesting question:[40]

> In the scholarship which has been devoted to the question of the date of the Olympia, one fundamental question has never been asked: how did the Greek world know when to assemble for the festival? One can, of course, suppose that the (σπονδοφόροι) *spondophoroi* (Elean citizens acting as games officials) were able to announce the sacred truce and the festival time throughout the Greek world, but one has only to consider the magnitude of such a task to realise that a common date known to every Greek, would have been desirable, if not necessary.

And this leads to the challenge, whose calendar are the Eleans using, if indeed they are using a calendar at all? We can say a little bit more; by the fifth century the Olympic festivities last for five days and are concluded on a full moon. But whether that full moon could fall as early as July, in August, or perhaps as late as September, remains under bitter dispute.

To return to the question about when, in Julian terms, did the second Greco-Persian War take place; there is an answer. In an appendix to his biography of Xerxes, titled "The Chronology of Xerxes' Advance through Greece" Richard Stoneman derives a workable schedule combining Herodotus' text with the certainties offered by the Persian New Year, and the partial eclipse of the sun observed from the isthmus at Corinth in early October 480.[41]

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39. Ibid.

40. Ibid, 219.

41. Richard Stoneman, *Xerxes* (New Haven CT, Yale University Press, 2015), 226-228. For the year 480 (Thermopylae) the vernal equinox fell on March 25, the summer solstice on June 29, the autumn equinox on September 29, and the winter equinox on December 26. Similarly for the Julian year 490 (Marathon) the vernal equinox fell on March 27, the summer solstice on June 29, the autumnal equinox on September 29, and the winter solstice on December 27.

A TENTATIVE TIMETABLE FOR 480 BC

Late March	*Nowruz* festival in Sardis
Early May	Floating bridge construction and crossing of the Hellespont
10-19 August	Spartan *Karneia*: Leonidas advances northward [from Sparta]
12 August	Persian army advances from Therme [Chalcidice Peninsula]
14-19 August	75th Olympic festival (776 + 4 - (4 x 75) = 480)
24 August `	Persian fleet battered by three days' *meltemi*
29-30 August`	Battle of Thermopylae
2 September	Attic month of Boedromion begins
2-4 September	Battle off Artemision: [more] storms
7 September	Persian army reaches Athens
8-29 September	Sack of Athens
29 September	Persian fleet reaches Phaleron
30 September	Battle off Salamis
2 October	Partial solar eclipse observed at defensive wall near Corinth

And what this really tells us is that somewhat inexcusably, despite their pressing need for fleet repairs, the Persians are in no hurry after their victory at Thermopylae to finish off the Peloponnesian Alliance. They wilfully let their tactical and strategic advantages slip away. With winter approaching and with it the end of the 480-campaigning season time is on the Hellenic side provided the Hellenes retain any measure of unity.

A Rough Chronology

Over the years classical scholars have inferred a number of reasonably reliable Julian dates for the events described by Herodotus. Also included in this list overleaf are some events and the dates of several notable individuals before the Hellenistic period just to show *who's who* in the Eastern Mediterranean and where they might fit in.[42] Chronology is the union of historiography and arithmetic. Modern Western readers of Herodotus should not begin to feel too complacent, as we still have the remnants of a luni-solar calendar system when it comes to determining the date of the principle Christian festival. The First Council of Nicaea settled this once and for all time back in AD 325 with the simplest of all possible formulas, but they omitted to write down and individually sign-off on precisely what it was that they had all agreed upon. Following one interpretation using the Gregorian calendar, Easter Sunday can fall as early as March 22 and as late as April 25, but as is often the case: Satan lurks in the details. Their deliberations result in the agreement that Easter would be celebrated on the first

42. This list is adapted from Sarah B. Pomeroy, *Goddesses, Whores* (New York, NY: Schocken Books, 1975), vi. The Bronze Age is taken as 1600-1100; the Dark Age 1100-800; the Archaic Age 800-480; and the Classical Age 480-323.

Sunday after the first full moon occurring after the vernal equinox. Except if that first full moon fell on a Sunday then Easter would be the next Sunday. Simple enough—using the Julian calendar—if it was right—it was not quite. But the ecclesiastics wanted to settle the date for hundreds of years into the future and did not want to use astronomical predictions based on celestial observations—astronomers being of the same heathen ilk as astrologers—so they decreed a notational date for the vernal equinox (set as March 20) and compiled a list of notational or ecclesiastical full moons. Consequently, if we use the simple Nicaean formula, but with correct astronomical dates for the equinoxes and the cycle of full lunations, we can sometimes still get the "wrong" answer. Three-hundred and eighteen mitres and crosiers give neither assurance of wisdom nor infallibility.

A minor mystery posed by Herodotus appears in his commentary on Persian customs. He is explaining that the Persians celebrate their birthdays and that the biggest celebrations of all are those for their monarch. His challenge is that there is no Ionian Greek word that he can use to describe this sort of anniversary, so he settles for ἐγένετο meaning "come into being."

APPROXIMATE JULIAN TIMELINE FOR HERODOTUS' *HISTORIES* AND AFTER

1600		
BRONZE AGE	1184	Traditional date for the fall of Troy
1100		
DARK AGE		
800		
	776	Traditional date for the first Olympiad
		Homer—late eighth century
		Hesiod—late eighth century
regnum	716-678	Gyges of Lydia
700		
	650-600	Draco, first Athenian legislator–Laws
600	594	Archonship of Solon
	590-519	Miltiades son of Kypselos
	590-529	Cyrus the Great
	554-489	Miltiades son of Kimon
	550-486	Darius the Great
	550-475	Atossa of Persia
	545-510	Tyranny of the Peisistratids
ARCHAIC AGE	535-475	Heraclitus
	523-456	Aeschylus
regnum	519-489	Cleomenes I of Sparta
	516-?	Gorgo of Sparta
	516-?	Artemisia of Halicarnassus
500		
regnum	498-454	Alexander I of Macedon

	497-406	Sophocles
	490-479	Helleno-Persian Wars
regnum	486-465	Xerxes I of Persia
	484-425	Herodotus
	480-406	Euripides
…480		Partial solar eclipse October 2, 480
	431-404	Peloponnesian War
	429-347	Plato
CLASSICAL AGE	428-354	Xenophon
400		
	384-322	Demosthenes
regnum	359-336	Philip II of Macedon
regnum	336-323	Alexander III of Macedon
323		

> Of all the days of the year, one's own birthday is held in the most honour. On this day they claim the right to serve a larger feast than on any other day. The more fortunate among them serve the meat of oxen, horses, camels, and donkeys roasted whole in ovens, while the poor serve the meat of small animals such as sheep and goats. [2] They eat few main dishes, but consume many desserts, and the latter are not served as one course, but at intervals throughout the meal (Hdt. 1.133.1-2).[43]

Herodotus goes on to jest that the Hellenes are always hungry as nothing worthwhile is served after the main course![44] But the real mystery is that he does not explore myriad concerns over how the Persians are able to compute a birthday or anniversary—what sort of calendar did they use? Did they name and number their months?[45] We can speculate that they simply counted forward from a solstice or equinox.

In England the New Year did not commence on 1 January until passage of Lord Chesterfield's *Calendar (New Style) Act* of 1750; until then the country used quarter days with the legal New Year falling on Lady Day, 25 March.[46]

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43. The Greek for this passage reads as follows:
ἡμέρην δὲ ἁπασέων μάλιστα ἐκείνην τιμᾶν νομίζουσι τῇ ἕκαστος ἐγένετο. ἐν ταύτῃ δὲ πλέω δαῖτα τῶν ἀλλέων δικαιεῦσι προτίθεσθαι: ἐν τῇ οἱ εὐδαίμονες αὐτῶν βοῦν καὶ ἵππον καὶ κάμηλον καὶ ὄνον προτιθέαται ὅλους ὀπτοὺς ἐν καμίνοισι, οἱδὲ πένητες αὐτῶν τὰ λεπτὰ τῶν προβάτων προτιθέαται.

44. For further discussion on Persian dessert dishes and alcohol consumption, see How and Wells, *Commentary on Herodotus*, 1912, 1.1.133.1-4.

45. The ancient Persians used a solar calendar and their New Year—*Nowruz*—was then as now celebrated on the vernal equinox.

46. The Calendar (New Style) Act 1750 had two parts: the New Year would begin on 1 January rather than 25 March (Lady Day), and the calendar shifted by eleven days to align with the Gregorian calendar from 1582 already in use over much of Europe. Consequently the year 1752 began on 1 January; and, Wednesday, 2 September 1752 was followed by Thursday, 14 September, but with the usual quarter days, originally based on religious

Conclusions

That Herodotus does not have an orderly supranational dating system is largely irrelevant, no matter how frustrating modern readers find some of his chronological vagaries. By happenstance, when in book 9 of his *Histories* he notes the solar eclipse observed by Cleombrotus at the isthmus near Corinth he inadvertently gives future scholars a *terminus ante quem* for the battle off Salamis. Furthermore in book 1 he gives us a Lydian king list extending from Gyges down to Croesus, and since the latter was defeated by the Persian Cyrus the Great we can work backward from Xerxes et al to the late eighth century and begin to sketch-in approximate Julian dates. But there are many instances where much more certainty in the ordering of events might make our inferences over motives or causality more evident.

Examples abound. When does Miltiades capture the island of Lemnos and give it to Athens? If he does so early in the fifth-century, then he is an Athenian benefactor; but if he does it during the penultimate decade of the sixth century, then he is just a minor tyrant and sycophant—all the difference in the world. When does Cleomenes die? Is it before or after the battle of Marathon? And for that matter—when does the Battle of Marathon take place? Most scholars agree on the summer of 490, but not on which month, and some will even dispute the year. Like many a commonplace—why write down what everybody knows?[47] As we have seen, reports of lunar and solar eclipses can have both narrative significance and nail down historical events in time. However, in archaic Greece these astronomical events were not properly understood. Indeed it was only late in the fifth century that ἔκλειψις (ékleipsis) and related terms were specifically used to describe eclipses.[48] Perhaps Herodotus' sources were superstitious and reluctant to include references to these natural phenomena. Afterall, the Greeks regarded them as an indication of the displeasure of their gods.

Herodotus tells us the Spartans arrive in Attica too late to participate in the battle of Marathon, perhaps deliberately, but not when. Nowhere does he tell us who leads the Spartan contingent, although the Spartan army is almost invariably led out of the Peloponnesus and into battle by a king or a regent. So often we convince ourselves that Herodotus knows full well something that we now consider critically important, but for some reason—perhaps at the time it appears far too much of a commonplace—he never sets it down in writing. Sadly, no one

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festivals: Lady Day (25 March), Midsummer Day (24 June), Michaelmas (September 29) and Christmas (25 December) still retained for some contracts.

47. For a full discussion on whether we should accept the traditional date of September 12, 490, rather than August 12, 490 for Marathon, see chapter five of Donald W. Olson, *Celestial Sleuth* (New York, NY: Springer New York, 2013), 147-195.

48. Whereas lunar eclipses, when they occur, can be viewed from anywhere provided the moon is above the horizon, views of total solar eclipses are rare and always very much time and place specific.

else does either, and now, millennia later, any chance of certainty is lost. Sometimes the arguments from Herodotus' silences are less than compelling and are just maddening.

Herodotus does not have a convenient supranational grid to hand, nor evidently does he have any compelling reason to develop one. Remember his purpose as set out in his Proem is simply to explain the origin of the conflict between the barbarians and the Hellenes. His focus is on the eighty years from the Lydian king Croesus' conquest of the Ionian city-state Ephesus in 559 down to Xerxes' spectacular battle at Thermopylae, and the naval battles off Artemision and Salamis in 480; and to the decisive Persian defeats in 479 at Plataea and Mycale, so all of his focus is in the late Archaic age but within living memory. Notably, some four hundred or so years later, the Romans do not develop a grid either. In fact, the compelling reasons in the Western world to develop a supranational grid are not secular at all, they come from the Christian religion; but even then there is no great haste in the matter. As we have seen, it is another five hundred years after the creation of the Julian calendar that a Scythian monk determines that Anno Domini might make a sensible benchmark for such a future grid; but another eleven hundred years would drift by before our now quite familiar BC/AD time-line was seriously proposed, and still another one hundred and fifty years after that before its universal adoption. If necessity is the mother of invention, Herodotus has no need for a date—not that he would have eschewed one if such were readily available. We must not forget, Herodotus creates a completely new literary genre—accomplishment enough one would think.

Bibliography

Ball, Rashid. "Generation Dating in Herodotus." *The Classical Quarterly* 29, No. 2 (1979): 276-281.

Feeney, Denis. *Caesar's Calendar: Ancient Time and the Beginnings of History.* Berkeley and Los Angeles, CA; London: University of California Press, 2007.

Glover, Eric. "The Eclipse of Xerxes in Herodotus 7.37: *Lux a Non Obscurando*." *The Classical Quarterly* 64, no. 2 (December 2014): 471-492.

Hannah, Robert. *Time in Antiquity*. London and New York, NY: Routledge, 2009.

How, W. W. and J. Wells. *A Commentary on Herodotus*, volume 1 (books I-IV). Oxford: Clarendon Press, 1912 (reprinted to 1967, 2 volumes).

____. *A Commentary on Herodotus*, volume 2 (books V-IX). Oxford: Clarendon Press, 1912 (reprinted to 1964, 2 volumes).

Meritt, Benjamin. *The Athenian Year*. Sather Classical Lectures, volume 32. Berkeley and Los Angeles, CA: University of California Press, 1961.

Miller, Stephen G. "The Date of Olympic Festivals." *Mitteilungen des Deutschen Archaologishen Instituts* 90 (1975): 215-231.

Monmouth, Geoffrey of. "The History of the Kings of Britain: An Edition and Translation of De gestis Britonum (Historia Regum Britanniae)." In Arthurian Studies 69, edited by Michael D. Reeve, translated by Neil Wright. Woodbridge, England: Boydell & Brewer Press, 2007.

Olson, Donald W. *Celestial Sleuth: Using Astronomy to Solve Mysteries in Art, History and Literature*. New York, NY: Springer New York, 2013.

Pomeroy, Sarah B. *Goddesses, Whores, Wives, and Slaves: Women in Classical Antiquity*. New York, NY: Schocken Books, 1975.

Shaw, Pamela-Jane. *Discrepancies in Olympiad Dating and Chronological Problems of Archaic Peloponnesian History*. Stuttgart, Germany: Franz Steiner Verlag, 2003.

Strassler, Robert B. (Ed.). *The Landmark Herodotus: The Histories.* Translated by Andrea L. Purvis. New York, NY: Random House, 2007.

Stoneman, Richard. *Xerxes: A Persian Life*. New Haven, CT; and London: Yale University Press, 2015.

Wilcox, Donald J. *The Measure of Times Past: Pre-Newtonian Chronologies and the Rhetoric of Relative Time.* Chicago, IL; London: University of Chicago Press, 1987.

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Multinationals in the Grain Trade: Bunge and Nidera in the Lower Danube Region (1930–1948)

By Cristian Constantin[*]

This study presents, in a positivist manner, the evolution in the Lower Danube area of two of the most important grain export companies in the world, by highlighting the changes of the Danube grain market under the impact of the two totalitarian trends and that of World War II. It is in this competitive environment that the Dutch companies Bunge and Nidera also manifest their presence. This paper is based on unedited sources preserved at Brăila County Service of the National Archives of Romania, as well as on news and articles from the Romanian press of the 1930s. This approach has not allowed drafting statistical series able to underline the sinusoidal waves of the commercial trades undertaken by the two Dutch companies in the Danube ports. The archival material at our disposal has allowed the reconstruction of the Dutch company Bunge's network in the extended area of the mouths of the Danube, precedence having the branches existing in the 1930s on the present-day territory of the Republic of Moldova.

Introduction

Who would have bet that the company founded by Johann Bunge in Amsterdam in 1818 would be, two centuries later, one of the largest companies of its type in the entire world? At first, a family trading house, the company gradually expanded their import-export activity beyond the basins and silos of the Dutch port. 41 years after its establishment, the Dutch company founded a branch in the rival Belgian port of Antwerp. Edouard and Ernest, Johann's grandsons, broadened their vision to other areas. Bunge, alongside the Born family, entered the Argentinian market in 1884, speculating the richness of the South-American hinterland and taking advantage of the trade experience of the merchants and intermediaries in the Rio de la Plata area. Their entrance on the Argentinian market and the relations with the ruling circles in Buenos Aires allowed Johann Bunge's descendants to develop a world network of branches for purchasing, storing and speculating the opportunities on the greatest trade market in the world at that time, that of grain. The company entered the Brazilian market in 1905 and, after the Great War, became a significant player in the production and trade structures in North America. After more than a century since the establishment of their first office in the capital city of the Netherlands, the company relocated their headquarters to Sao Paulo, and then, in 1999, to White Plains, New York. At present, the families Bunge and Born are no longer majority stockholders.

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The main purchasing centres for Bunger were the cereal centres in Asia and Europe.[1]

In 1920, in Rotterdam, one of the world's most remarkable companies in the grain trading sector was founded. Two Jewish brothers, Mayer-Wolf and Salzer-Levy Drake, laid the foundation of Nidera Company in a world dominated by economic liberalism subjected to the interwar protectionist policies. The founding members relocated to Argentina, one of the most representative cereal markets in the world, after only nine years. Exploiting the resources from the La Plata area did not keep the Drake family entrepreneurs away from the profitable business in the world of Oceanic Europe warehouses. Rotterdam remained a bridgehead of Nidera Company's own interests in the game of international cereal trade. The name of the company is an acronym of the most important markets on which the Mayer-Wolf and Salzer-Levy Drake brothers' company was involved in the 1920: the Netherlands, East (India), Deutschland [Germany], England, Russia and Argentina.[2]

Throughout its existence, the company built an entire international network that allowed its development and direct access to the resources of the producers in the main cereal centres in the world. The Dutch trader, as other similar companies, significantly influenced the production structures in the hinterlands that they heavily exploited. Nidera diversified their economic interests after World War II, investing resources in order to accumulate an impressive capital by manufacturing and trading vegetal oil and chemical fertilizers for agricultural lands in the entire world. The market globalization and the social and economic context in Eastern Europe after the fall of the Iron Curtain, in 1989, allowed the (re)integration of the extended Black Sea area in the world grains market.[3]

The Granary's Economic Avatars

The most fertile plains in the Old Kingdom of Romania lie along the Danube River and between the Prut and Siret Rivers. The economy of Modern Romania depended, to an overwhelming extent, on the grain harvested from these areas. The Bunge Company network in Romania primarily focused on the cereal basin on the two banks of Prut River. This is the reason why we are going to lay emphasis on the specificities of Moldavian economy, more precisely, on Bessarabia, a territory that was united with Romania in 1918.

1. See history of Bunge Company, available at: http://www.bunge.com/who-we-are/our-history.

2. See a short history of Nidera Company, available at https://goo.gl/zs9Usw.

3. Rudolf Stöhr and Klaus Schumacher, *The History of the European Grain Market* (Brussels: Coceral, 2008), 48.

The Moldavian and north of the Black Sea steppe soils had been known by European merchants since the end of the 17th century as among the most fertile on the continent. Their integration into the great international market stimulated the local production structures and sped up the production pace, creating, after 1829, an acerbic competition between Romania and Russia. Moldavia, between the Carpathian Mountains to the west, and the Prut River to the east, had represented a cereal basin well connected to the Romanian ports at the Maritime Danube ever since the last decades of the 19th century through the railway network and, partly, through the small vessel fleet of the foreign ship-owners who exploited the hydrographic basin of the river Prut, the border between Romania and the Tsarist Empire.

The Great Union of 1918 represented a quantitative and qualitative growth in the economic potential of Great Romania; however, as a whole, the adopted reforms (especially the 1921 Agrarian Reform) dramatically accentuated the differences between the Romanian village and the urban areas. Great Romania was a state in which most of the agro-alimentary outlets, once meant for external trade, moved towards Transylvania, the new Western province reunited with the country in 1918, for covering their food necessities.[4] The economic policy of Romania is characterised by four evolution stages from 1919 to 1938:

1) The 1919–1925 interval was characterised by economic recovery after WWI.
2) 1926–1929 was a period of gradual growth of the Romanian economy, against the background of the revival of the trade relations with the traditional partners and based on agro-alimentary stocks similar to the antebellum ones. It was nevertheless discontinued by the defective harvest in the autumn of 1928.
3) The period of the Great Depression (1929–1933) was characterised by a substantial drop of prices for the main products exported by Romania and by the under-priced selling, in almost all years of the Great Crash, of important quantities of corn, barley and oats.
4) The recovery period, starting in 1933, and continuing up to the outburst of WWII, was an age of turning upside-down the previous socio-economic trends. During this time, the Romanian State took action with a view to establish the balance between the values acquired for exports and the amounts paid for imported goods.[5]

4. Virgil N. Madgearu, *Evoluţia economiei româneşti după războiul mondial* [*The evolution of Romanian economy after the world war*] (Bucharest: Editura Ştiinţifică, 1995), 123; Bogdan Murgescu, *România şi Europa. Acumularea decalajelor economice (1550–1950* [*Romania and Europe. Accumulation of economic gaps*] (Iaşi: Polirom, 2010), 225–243.

5. C. C. Giurescu, M. G. Romaşcanu and N. Georgescu–Roegen. "Comerţul Exterior," in *Enciclopedia României*, IV, *Economia naţională: circulaţie, distribuţie şi consum* (Bucharest:

The international trade of Romania was affected after the Great War by the lack of organisation at the level of transport and communication sectors in all Romanian territories. The railroads, roads, post, telegraph and telephone lines were among the factors that hindered the recovery of economy for at least four or five years. The central authorities understood this deficiency quite quickly, but they failed to act on time towards the modernization of the transport and communication routes. During a first stage, Romanian authorities were content to repair the antebellum infrastructure and modify the track gauge of the rails in Bessarabia according to the European pattern. In 1938, at a population of 19,750,004 people and an area of 295,049 km^2, Romania had 11,375 km of railroads, out of which 1,218 km in Bessarabia and 4,094 km in the Old Kingdom. The 5,312 km, distributed in the major agricultural areas of the country and connected to the national maritime ports still denote the Romanian State's inability to develop transport. Aside from these drawbacks, there were also remarkable situations: Transylvania, inheriting the Austrian-Hungarian Empire infrastructure, counted 5,468 km of railroads as of 1938, by the maintenance and development efforts made by the decision-makers in Bucharest.[6]

Bessarabia had benefited, ever since the age of the Tsarist Empire, from a magisterial central railroad network that connected the cities of Tiraspol, Tighina, Kishinev, Ungheni and Iaşi, which was the most viable means of land transportation of goods.[7]

Moldova between the Prut and Dniester, a territory belonging to the Tsarist Empire until WWI, united with the Romanian Kingdom on March 27/April 9 1918. In the beginning of the interwar period, against the background of the Russian Civil War, and despite the significant exports traded by the White counterrevolutionaries through the Crimean ports, Romania was the main grain exporter in the Black Sea basin.[8] The fertile lands of Moldova between Prut and Dniester played an important role in this equation. The population of Bessarabia counted, at the date of the Union with Romania, a little more than 2.6 million

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Imprimeria Naţională, 1943), 474; Ion Veverca, Virgil Madgearu and Petre Constantinescu, "Politica comerţului exterior," in *Enciclopedia României*, IV, 438-439.

6. I. Miclescu and V. Mişicu, "Căile ferate române," in *Enciclopedia României*, IV, 53.

7. Vasile Maxim, "Unele aspecte geopolitice legate de infrastructura căilor de transport din Basarabia," in *Politica marilor puteri în Balcani şi Europa Centrală, Proceedings of the International Symposium, October 10-12, 2013* (ed.) Nicolae Chicuş, 404-406 (Chişinău: Garamont-Studio).

8. For a detailed analysis, see Cristian Constantin, *Comerţul cu cereale la Gurile Dunării: integrarea pe piaţă, structuri productive şi infrastructura de transport (1829–1940) (*Brăila: Istros, 2018), 516-528.

people, out of whom 85% lived in rural areas, and raised to 2,864,402 inhabitants in the year 1930.[9]

By comparison with other Romanian provinces, Bessarabia (14%) owned the country's largest arable area. After the Great War, approx. 26% of the arable area in Bessarabia was cultivated with barley, 24.3% with corn, 15.1% with winter wheat, 6.1% with spring wheat, 5.5% with oats, 4.3% with rye, 10.6% with natural and artificial hays, and 8.1% with plants. The statisticians of the time estimated the whole agricultural production of Bessarabia after WWI to c. 2,500,000 tons, at an approx. average of 850 kg/ ha.[10]

Before World War I, c. 1,300,000 tons of grain had been annually exported from Bessarabia, most of it (more than 70%) harvested from lands owned by landowners and only about 30% from the totality of agricultural lands in Bessarabia. After the outburst of the Great War and up to mid-1920s, there was a down to zero decrease of Bessarabian grain exports.[11]

The Agrarian Reform applied in Romania after WWI affected 1,739 out of more than 2.000 villages in Bessarabia. On average, c. 600 ha were distributed to each village in which the provisions of the reform were enforced.[12] Generally speaking, the agrarian reform implemented in Bessarabia fundamentally altered the old ratio between land estate and labour, peasants becoming the main owners of agricultural lands. After the reform, 3,648,747 ha (87.2%) of land estate in Bessarabia was owned in lots of up to 10 ha, 180,984 ha (4.3%) – lots between 10 and 100 ha, whilst the lots of 100 ha and more amounted to only 352,619 ha (8.5%).[13] The agrarian reform was intended as a contribution to consolidation of peasant estate based on the peasant and his family's labour, but it did not represent, as anticipated, a considerable improvement in the living standards of the Romanian rural world. The transition from the large agrarian estate to the small peasant household stimulated the rural dwellers' interest in the thorough exploitation of their own lots, but did not overall produce the effects expected by the authorities. The small estate, corroborated with the lack of modern technical means, proved unprofitable for one of the main economic areas of the Romanian State. The scarcity of hard currency and the Romanian currency (Leu) fluctuations can also be attributed to the qualitative and quantitative decrease in the cereal

9. I. Teodorescu, "Basarabia," *Buletinul Statistic al României* 15, no. 1 (1919): 22-28; S. Manuilă, and D. C. Georgescu. *Populaţia României* (Bucharest: Monitorul Oficial şi Imprimeria Naţională, 1937), 10.

10. H. Block, and A. Cândea, *Calendarul Basarabiei pe 1931 (*Chişinău: Tipografia Eparhială "Cartea Românească"), 72.

11. Barlo Iacubovici, "Raţionalizarea agriculturii basarabene," *Basarabia Economică* 2 (1938): 9-10.

12. Ion Ţurcanu, *Relaţii agrare din Basarabia în anii 1918-1940 (*Chişinău: Universitas, 1991), 29.

13. M. Georgescu, *Reforme agrare. Principii şi metode în legiuirile române şi străine* (Bucharest: Tipografia Bucovina I.E. Torouţiu, 1943), 92-93.

stocks of Great Romania, as a result of the enforcement of the Agrarian Reform of 1921.

In 1930, a new agricultural census was carried out. According to the interpretation of the collected data, 75% of the agricultural estates in Romania were made of lots smaller than 5 ha.[14] Bessarabia was no exception. The small estate represented 70.25% out of total. In Lăpuşna and Orhei counties, the estates of up to 10 ha represented 84.3% of total, as opposed to the estates between 10 and 50 ha, which represented only 10.5%, whilst the agrarian estates of more than 50 ha represented only 5.2% of the total, in relative values. In what concerns the counties in Southern Bessarabia, one notes a balance in agrarian ownership. In the counties of Ismail, Cahul, Tighina and Cetatea Albă, agricultural lands of up to 10 ha were 56% of the total, the ones between 10 and 50 ha amounted to 37%, and 7% was the percentage of the estates larger than 50 ha.[15]

Up until the outburst of the Great War, a certain consistency in the structure of cultivated areas and harvests is noted, even though oscillations have been recorded because of atmospheric instability (droughty years and/or abundant rainfalls). After the war, one records a contraction of seeded areas and a change in the traditional ratio between various cereals, but also a dramatic drop in the quantity of harvests in the first years. In 1924, the amount of winter wheat harvested in Bessarabia went down from 54,963 wagons (as recorded in 1910), to 28,958 wagons. Similarly, spring wheat harvests dropped from 19,197 to 10,987 wagons, while the rye harvest dropped from 27,762 to 5.978 wagons, and that of barley, from 56,564 to 30,714 wagons. Corn was the most cultivated cereal in Bessarabia, but the defective production system affected it too. The 77,012 wagons harvested in the year 1924 represented only 79.45% (96,921 wagons) of the quantity of corn harvested in 1910. The output of cereals per hectare reached a critical point in 1923, with a 340 kg average, whilst the maximum output was recorded in 1926: 1,330 kg/ha. After 1926, a trend of maintaining the output per hectare around 1,000–1,100 kg is noted. This essentially represents one of the negative effects of the 1921 Agrarian Reform.[16]

During the interwar, the output of Bessarabian agriculture was below the production possibilities of the soil in the region, mainly because of unfavourable weather conditions, as was the case of the 1921, 1927, 1928 and 1935 droughts.[17] One should also consider the particularities of the sustenance cultures cultivated in peasant households, as a result of the general economic situation in Romania, the

14. Victor Axenciuc, "Evoluţia economică a României. Cercetări statistico-istorice 1859–1947," in *Agricultura (*Bucharest: Editura Academiei Române, 1996).

15. Horia N. Lupan, "Cercetări asupra preţului şi rentei pământului în România," *Analele Institutului de Cercetări Agronomice al României* 5 (1933): 253.

16. H. Celebidachi, "Agricultura," in *Basarabia. Monografie* (ed.) Ştefan Ciobanu (Chişinău, 1993), 335.

17. Ţurcanu, *Relații agrare în Basarabia în anii 1918–1940*, 1991, annex VI.

low values of capital invested in agriculture, and the quantity and rudimentary quality of agricultural tools in the peasants' households. Adding to these are the low agricultural and trade education level of the rural population and the absence of any institutions of agricultural loans that would not turn into generational debt for peasantry. For example, a reaping machine serviced 54 agricultural households in Bessarabia, and a thresher, 287.1 ha. Almost half of the households in the area did not own any ploughs or harrows. Despite the various unfavourable factors, the agriculture in Bessarabia obtained, on a yearly basis, important quantities of grain, varying between 1.5 and 3 million tons.[18]

Regarded wholly, the cooperative movement in Bessarabia recorded obvious progress between the two world wars, despite the drop by a quarter in the number of cooperatives in the 1930s. The absolute majority belonged to credit cooperatives (422 out of 764 recorded in 1938). The Great New York Crash led to a credit crisis, which, in turn, led to the Romanian authorities' intervention in favour of agricultural debtors. This measure greatly affected the mechanism of agricultural loans in Romania. After 1933, measures were taken with a view to reinstating the agricultural loans for small agriculturalists, at a minimal interest rate.[19]

Generally speaking, during the interwar, in the new territories united with the country in 1918, the commercial code adopted by the Old Kingdom in 1887 was in force alongside the codes of the empires that the regions incorporated to Great Romania had been part of. The provisions of the Romanian Commercial Code became applicable in Bessarabia as late as 1928. The commercial codes applicable in Romania were proven viable for the emergence of new economic institutions owing to their dominant liberal concepts.[20]

The Bessarabian foreign trade up to World War I took two fundamental avenues: with Russia and with the European countries. An important part of trade was played by the ports at the Maritime Danube and the railroad network developed by the tsarist authorities.[21] The trade exchanges of Bessarabia were in close connection with production, as the country exported cereals, wine, fruits and cattle, being practised by as little as 1% of the population, preponderantly allogeneic elements. After the union, the Bessarabian trade activity significantly intensified, at least at a first sight. Many companies from the Old Kingdom opened branches in Bessarabia, positively influencing the recovery of Romanian

18. Virgil N. Madgearu, *Evoluţia economiei româneşti după războiul mondial* (Bucharest: Editura Ştiinţifică, 1995), 56-57, 63, 72-74; N. Georgescu-Roegen, "Inventarul agricol," in *Enciclopedia României*, IV, 340-342.

19. Nicolae Enciu, *În componența României Întregite. Basarabia şi basarabenii de la Marea Unire la notele ultimative sovietice (*Bucharest – Brăila: The Publishing House of the Romanian Academy, Istros, 2018), 127.

20. Valentin-Stelian Bădescu, and Cosmin Iordache, "Scurt istoric al evoluţiei Dreptului Comercial," *Buletinul Universităţii Naţionale de Apărare Carol I* 1 (2013): 280-289.

21. N. Enciu, *În componența României Întregite*, 144-145.

economy after the first world conflagration. Dramatic episodes were recorded during the prolonged drought years, such as 1928 and 1935, which severely affected the trade in Bessarabia. Throughout the 1920s, most Bessarabian districts of the Chamber of Commerce and Industry, established after the Great War, united with similar institutions on the right banks of the river Prut, with a view to eliminate the gap between the two provinces.[22]

With a view to stimulating the economy after the Agrarian Reform of 1921, Romanian authorities initiated a process of starting-up cereal markets in areas depending on agricultural production, which augmented the small households' role in international trading. The number of cereal markets in Romania multiplied by 7 from 1919 to 1936, being often encountered in the plain areas of the Old Kingdom and Bessarabia, dominated by grain cultures.[23] In 1930, there were 1,176 enterprises of agricultural products trade in Bessarabia, 57.7% having been established after World War I. An ascending trend (67%) is also noticed in banking, cooperatives and insurance, with a number of 352 such companies.[24]

Ethnically, the interwar Bessarabian trade was practised by allogeneic elements. Romanians mostly dealt with agriculture. At the end of the interwar, 84% of the commercial companies in Bessarabia had Jewish owners.[25]

In the last two decades of the 19th century, Belgium and the Netherlands had become major economic partners of Romania. The commercial houses in the ports of Anvers and Rotterdam had become interested, because of the long-term warehousing possibilities, in purchasing agro-alimentary products from the Black Sea area.[26]

After World War I, most of the commercial relations between European states were reinitiated. Primarily interested in grain, but confronted with defective stocks in the context of the new socio-economic realities in Romania, the Netherlands imported only 100,000 tons from Romania in 1920, at a price of 246,121 lei. Barley (62,496 tons; 162,491 lei) dominated the business that year. A significant increase was recorded in 1923, when 133,691 tons of Romanian cereals were sent to Dutch ports, at a price of 941,593 lei. The export was animated by corn sales (68.75%, 91,921 tons; 680,219 lei).

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22. *Buletinul statistic al României*, 14.1 (1919); Const. I. Lungu, and T. Al. Ştirbu, "Basarabia economică," in *Basarabia economică. Monografie* (ed.) Ştefan Ciobanu (Chişinău, 1993), 385.

23. P. Sterian, "Comerţul interior în România," *Sociologie Românească* 46 (1938), 164.

24. M. Georgescu, and P. Sterian, "Comerţul Interior," in *Enciclopedia României*, IV, 423-424.

25. Ibid.

26. Daniela Buşă, "Spaţiul sud-est european şi realităţile sale economice (sfârşitul secolului al XIX-lea – începutul secolului al XX-lea)," *Studii şi Materiale de Istorie Modernă* 15 (2002): 50-51; Emil Octavian Mocanu, *Portul Brăila de la regimul de porto franco la primul război mondial (1836–1914) (*Brăila: Istros, 2012), 257-352.

1926 was the maximum point of Romanian exports to the Netherlands up to the outburst of the Great Depression. Romania exported that year 135,863 tons of cereals to Dutch destinations, at a price of 977,408 lei. It is also the year 1926 when wheat export went above the 15,000 tons barrier. The price cuts on the grain international market, as an effect of the NY Crash, and the existence of significant stocks in the Danube ports attracted the Dutch merchants. Throughout the year 1930, the Netherlands imported 439,993 tons of cereals from Romania, paying 1,295,128 lei. Exports were dominated by barley (52.06%, 229,072 tons; 568,099 lei) and corn (35.41%, 155,853 tons; 511,198 lei). In the following year, a drop by 36.53% of Romanian cereal export to Dutch destinations is recorded.

In 1931, the Netherlands imported 279,301 tons of grain from Romania, paying 684,011 lei. The main traded goods was wheat (123,782 tons; 328,626 lei), followed by barley (94,991 tons; 231,337 lei) and corn (55,707 tons; 106,852 lei). Romanian grain export was revived in 1932, when the Netherlands alone purchased 431,398 tons, paying 848,782 lei. Trade was dominated by corn purchases (288,475 tons; 526,821 lei) and barley (130,402 tons; 290,756 lei). In 1933, it was a downfall of Romanian cereal exports to the Netherlands. Only 360,820 tons of grains destined to the Dutch partners left the Romanian ports: 185,273 tons of corn and 156,034 tons of barley. The following years recorded a significant downfall of the Dutch grain purchases at the Lower Danube, which went above 100,000 tons only in 1936 and 1937.[27]

With consideration to the particularities of international cereal trade and geographic position of the two states, the Romanian exports to the Netherlands took a standardised route from the ports on the Maritime Danube or Constanța to the Dutch warehouse from Rotterdam. In order to meet the demands of the exchange relations, alongside the traditional trade houses located at the mouths of the Danube, in the early years of the 1930s, two of the most important Dutch companies in the last century, Bunge and Nidera, entered the Danube market. These companies entered the Romanian market as modern trading houses, in which the HR and financial capital of the 'parent company' dictated the decision-making process.

27. The analysis was carried out based on statistical data in the series *Comerţul exterior al României* [*Romanian foreign trade*] for the years 1920–1940 and in the doctoral thesis by M. Popa-Vereş, *Comerţul nostru de cereale sub aspectul vieţii economice româneşti* (Bucharest, 1938), annexes.

The Network of Bunge Company in Romania

By commercial decision of August 6, 1930, Brăila Courthouse authorised the functioning of "*Bunge" Societate Anonimă Română de Comision şi Export de Cereale* (official acronym: BUNGE S.A.R.), headquartered at 8 Traian Str., Brăila. The decision was published in the Official Gazette of Romania, August 13, 1930.[28] The Managing Board of the company from Brăila consisted of Charles Hirschler (president), Friedrich Alexander (administrator) and Berhard Werthauer (delegate administrator). At first, Adolf Eisenstein was also a delegate administrator, but his responsibilities were cancelled afterwards by simply crossing his name and signature specimen with a horizontal line.[29]

In just one year, Bunge Company became completely integrated to the cereal market at the mouths of the Danube. From August 15 to September 2, 1931, under the circumstances of the Great Depression, commerce was animated by trades based on that year's harvest. Bunge, alongside Moldova Bank, sent to the Italian ports 1,560 tons of cereals on *S.S. Afrodite* ship. An impressive quantity of grain was sent to the great Dutch warehouse in Rotterdam. The 113,512 tons of cereals loaded on the Greek ship *Evanghelia Diakakis* were traded by two large companies present on the Danube market, Bunge and Continexport. The Greek ships *Aforensa* and *Autipi Mihalos* – with a charge of 4,401 tons and, respectively, 3,040 tons –, were freighted by Bunge for courses from Brăila to Gibraltar and French ports.[30]

Two years after having started the first branch in Romania, the company management decided to start up a new one. The Managing Board assembly of July 20, 1932 decided that a new branch of Bunge Company would open in Galati on August 1, same year. On this occasion, the Managing Board authorised M.V. Moglescu and Mihail Rosenber[31] to carry out the commission of cereal and other agricultural products "mandated by and in the name of the headquarters", either directly or through appointed middlemen, in the city and port of Galati, as well as in all counties from Moldavia and Bessarabia.[32] The initiative of founding the Galati branch was the debut of building a spider's web that would incorporate the grain market on the fertile plains on the two banks of River Prut. Most of the agencies in the ports and towns from Bessarabia were subordinated to the activity

28. Brăila County Service of the National Archives of Romania (abbreviated SJAN Brăila), fund *Camera de comerț* [*Chamber of commerce*] *Brăila* (structural part *Firme sociale*), file B 136/1930, 1-2.

29. SJAN Brăila, fund *Camera de comerț Brăila* (structural part *Firme sociale*), file B 136/ 1930, 3-4.

30. *Ancheta*, 3 Sep. 1931, 2.

31. SJAN Brăila, fund *Camera de comerț Brăila* (structural part *Firme sociale*), file B 136/ 1930, 14.

32. Ibid.

of Galati branch. The Brăila headquarters, aside from coordination at the national level, also dealt with the purchase of grain arriving up-river in the Danube ports.

In the spring of 1933, changes took place in the Galati branch of Bunge Company. The Managing Board of the Romanian company recorded Mihai Rosenberg's request to step out from management, as of May 1, that year, appointing S. Guttmann in his position. It was also decided that M.V. Moglescu's signature become again valid in the Galati branch, as of March 16, 1933.[33]

In the summer of 1932, one notes changes at the level of the management and vision of the Romanian branch of Bunge Company. Following the Extraordinary General Assembly on July 31, the company's Managing Board was appointed for the July 31, 1932 - July 31, 1933 interval. After elections, the following members were appointed: Charles Hirschler (president), Friedrich Alexander (advisor) and Isidor Rosenberg (delegate administrator). The responsibilities of the first two were substituted by Ludwig Wüerzburger.[34] The 1933 assembly decided that their mandate be extended to July 21, 1934.[35]

The rich crop from the Bessarabian plains in the summer of 1932 attracted the attention of international merchants. The management of Bunge Romania decided to harness the Budjak area and the possibilities of transport on the Black Sea. Cetatea Albă branch was placed under S. Trejvusz's management. His prerogatives as a manager and sole employee gave him the possibility to be the only person entitled to sign in the name of the Bunge branch from Cetatea Albă.[36]

In July 1933, changes occurred in the managerial network of Bunge in the Romanian area, whilst also being established agencies meant to cover the agricultural regions on the two banks of River Prut. Following the assembly of the Managing Board of June 26, 1933, published in the Romanian Official Gazette of July 3, 1933, D.A. Morgenstern was appointed, as of July 1, to manage the Galati branch, with "the right to engage this branch by his sole signature". D.A. Morgenstern had previously managed the agencies in Reni and Cetatea Albă. In the latter half of the year 1933, M.V. Moglescu was appointed manager of Reni branch. In the case of A. Morgenstern's absence from Galati, M.V. Moglescu was officially vested to manage this branch, and also the agency in Cetatea Albă. S. Trejvusz's right to manage the Cetatea Albă branch remained in force.[37] S.

33. Request for modification addressed to the Chamber of Commerce and Industry of Brăila by L. Wurzburger andi I. Rosenberg, as representatives of the company Bunge S.A.R., dated March 31, 1933; see SJAN Brăila, fund Camera de comerț Brăila (partea structurală *Firme sociale*), file B 136/1930, 18.

34. Ibid, 15.

35. According to the decisions adopted on July 31, 1933 by the Extraordinary General Assembly of Bunge S.A.R., in ibid, 20.

36. Ibid, 17.

37. Minutes drafted by L. Wurzburger (manager) and I. Rosenberg (delegate administrator) on July 4, 1933, in ibid, 19.

Guttman's activity as acting manager in the service of the Dutch company ceased in August 1933, when Reni agency was concentrated in Galati.[38]

At the same time, the Bunge managemen0t from Romania decided that Ismail port and the cereal markets in the area were attractive for local cereal producers. Michel Wilderman was appointed the first manager of Ismail agency (Ismail County), founded as of August 1, 1933. The agency dealt with commissioning of cereals and other agricultural products.[39] During the same month, a branch was also opened in the town of Chilia Nouă (Ismail County), managed by S. H. Can, with prerogatives similar to those of his counterparts from the other Bunge branches.[40]

The Bunge Romania Managing Board, assembled in extraordinary meeting on July 28, 1933, decided the establishment of a new agency in Tighina. The commercial purpose of this agency was to purchase (in cash) cereals and other agricultural products in the name and account of the Headquarters or of Galati branch, to which it was affiliated. Iacob Colpacci was appointed company representative to this purchasing agency. His responsibilities were restricted to purchasing, in cash, cereals and agricultural products, at the order of the company managers from Romania. As in the case of the other agents, Iacob Colpacci's responsibility were also that of completing the formalities for the charge, discharge, shipping, storage and manipulation of the goods purchased in the name of Bunge Company.[41]

During the same meeting, the Managing Board approved the establishment of a Bunge branch for the cereal basin in the south-western area of Bessarabia, which resulted in the foundation of a new branch, in Cahul County, city of Cahul, 0 by Solomon Feder, whose prerogatives were similar to those of his counterpart in Tighina.[42] Also to the branch in Galati was assigned the Lăpuşna County agency, headquartered in Kishinev, and coordinated by agent Nathan Fickelman.[43]

Since August 1933, a purchasing agency also functioned in Bălţi County, with the headquarters in Bălţi City, represented by Samuel Fickelman.[44] His rights and obligations were similar to those of his counterparts from the other Bessarabian agencies of Bunge. Isac Bortnic was given similar responsibilities at

38. Ibid, 23 and *Monitorul Oficial*, 9 August 1933.

39. According to Minutes no. 13 of the meeting of the Managing Board of Bunge S.A.R. on July 28, 1933; see: SJAN Brăila, fund Camera de comerţ Brăila (structural part *Firme sociale*), file B 136/1930, 21; and *Monitorul Oficial*, 9 August 1933.

40. SJAN Brăila, fund *Camera de comerţ Brăila* (structural part *Firme sociale*), file B 136/ 1930, 22; and *Monitorul Oficial*, 9 August 1933.

41. SJAN Brăila, fund *Camera de comerţ Brăila* (structural part *Firme sociale*), file B 136/ 1930, 24; and *Monitorul Oficial*, 9 August 1933.

42. SJAN Brăila, fund *Camera de comerţ Brăila* (structural part *Firme sociale*), file B 136/ 1930, 25.

43. Ibid, 26.

44. Ibid, 27.

the Tutova County agency, with the headquarters in Bârlad,[45] one of the important railroad junctions in the country and a prosperous borough ever since the Middle Ages.[46] Also in August 1933, Bunge opened a branch in Fălciu County, with the headquarters in the town of Huşi, whose management was assigned to N. Lucaci.[47]

During the same Managing Board assembly, a decision was made in regard to the establishment of an agency for Tecuci County, with the headquarters in Tecuci. The management of this branch was assigned to Moise Buchman.[48] David Landau was given similar responsibilities for the agencies established in Vaslui,[49] Roman,[50] Dorohoi,[51] Bacău,[52] Botoşani,[53] and Iaşi[54] counties, with headquarters in the homonymous cities, and in Putna County, with the headquarters in Focşani.[55] The prerogatives of these managers were identical to those of their counterparts in the Bessarabian agencies, which had almost exclusively been founded for cash purchasing of agro-alimentary products.

The minutes of the Extraordinary General Assembly of Bunge S.A.R. on September 12, 1934, hour: 18.00, presided by I. Rosenberg, appointed by the Managing Board, mentions the presence of 8 stockholders, representing 4,850 shares, with a total number of 970 votes. During the meeting, the Managing Board members were elected unanimously and "cheeringly", with mandates valid until the next Extraordinary General Assembly, scheduled for 1935. The members of the Managing Board were: Charles Hirschler, Ludwig Würzburger, engineer Maximilian Marcus and engineer Hermann Solomon.[56] Various modifications to the statute of the organisation were also adopted on the same occasion. The following paragraph was added to this statute:

45. Ibid, 28.

46. Laurenţiu Rădvan, *Oraşele din Ţările Române în Evul Mediu: sfârşitul secolului al XIII-lea – începutul secolului al XVI-lea (*Iaşi: "Al. I. Cuza" University Press, 2011), 486-490; see also Ion Plesnilă, *Istoricul liniei Galaţi – Bârlad (*Bucharest: Tipografia Gutenberg, 1898).

47. SJAN Brăila, fund *Camera de comerţ Brăila* (structural part *Firme sociale*), file B 136/ 1930, 29; and *Monitorul Oficial*, 9 August 1933.

48. SJAN Brăila, fund Camera de comerţ Brăila (partea structurală *Firme sociale*), file B 136/1930, 30.

49. Ibid, 31.

50. Ibid, 32.

51. Ibid, 33.

52. Ibid, 34.

53. Ibid, 35; and *Monitorul Oficial*, 9 August 1933.

54. SJAN Brăila, fund Camera de comerţ Brăila (partea structurală *Firme sociale*), file B 136/1930, 36.

55. Ibid, 37.

56. Ibid, 41.

"The branches and agencies of the company shall be validly represented by a sole signature designated by the Managing Board"[57].

Engineer Maximilian Marcus was elected President of the Company Managing Board on September 17, 1934, and Charles Hirschler and Ludwig Würzburger were appointed delegate administrators. The Managing Board appointed Max Eisenburh as manager and renewed the powers of attorneys of Mr Isidor Rosenberg and Mr Pincu Grosvald to sign in the name of the company according to the dispositions provided by the company statute. During the same meeting, the right of Mr A. Morgenstern and Mr M.V. Moglescu to collectively sign and engage for Galati branch and individually for Reni and Cetatea Albă agencies was also renewed. It was also adopted that the collaboration with S.H. Can for Chilia Nouă agency should continue. Ismail agency was dissolved and consequently, M. Wildermann's signature was also withdrawn. The Managing Board decided the revocation of Solomon Trejvusz from the management of Cetatea Albă branch, giving signature rights for this agency to Mr A. Morgenstern and Mr M.V. Moglescu. The delegate administrator, Charles Hirschler, was mandated to represent Bunge S.A.R. abroad, according to his decision and without requiring the permission of the central management organism. Against the background of downsize in grain stocks in Romania, during the same meeting, it was decided that the agencies in Iaşi, Tutova, Fălciu, Bacău, Roman, Dorohoi, Botoşani, Putna, Lăpuşna, Bălţi, Tighina and Cahul be dissolved.[58]

In the autumn of 1934, Bunge Company had the following network of agencies on the Romanian territory: headquarters (in Brăila), Galati branch (under the collective signature of A Morgenstern and M.V. Moglescu) and agencies in Reni (signature of A. Morgenstern or M.V. Moglescu), Cetatea Albă (signature of A. Morgenstern or M.V. Moglescu) and Chilia Nouă (signature of Dr S.H. Can).[59]

Romanian cereal export reached a critical point in mid-1930s, because of a plurality of factors originating in the avatars of the interwar Romanian agriculture and in the dramatic drop of prices on the specialized international market after the outburst of the Great Depression.[60] Under these nefarious auspices, on March 14, 1935, the Official Gazette of Romania published the decision by which Bunge dissolved the branch in Galati and the agencies in Reni and Cetatea Albă, withdrawing the signature for managers A. Morgenstern and M.V. Moglescu.[61]

Shortly after, Bunge Romania Managing Board also dissolved the agency from Chilia Nouă, decision in effect starting with July 31, 1935, also discontinuing

57. Ibid.

58. Ibid, 42.

59. Ibid, 43; and *Monitorul Oficial*, September 22, 1934.

60. See a detailed analysis in Vasile Bozga, *Criza agrară în România dintre cele două războaie mondiale (*Bucharest, 1975); Bogdan Murgescu, *România şi Europa. Acumularea decalajelor economice (1550-1950) (*Iaşi: Polirom, 2010), 256.

61. *Monitorul Oficial*, 62, March 14, 1935: 1947.

the prerogatives granted to S.H. Can. The assets and liabilities of this agency were transferred to the headquarters in Brăila.[62]

Bunge Romania General Assembly elected a new Managing Board on March 7, 1936. As a result of the stakeholders' votes, engineer M. Marcus, Ch. Hirschler, engineer H. Solomon and I. Würzburger were re-elected. C.J. Găgiulescu, Anastase Petrescu and F.H. Konter were appointed censors for the financial year 1936, and F. Schwartz, J. Constantinescu and C. Hiott were appointed acting censors.[63]

During the next two years, the activity of Bunge in Romania was carried out within the parameters of the Romanian-Dutch commercial relations, with a certain increase recorded in cereal exports from the Danube area to traditional Western destinations.

On April 20, 1938 another meeting of the Bunge Romania General Assembly was held to elect a new Managing Board. After counting the stakeholders' votes, Ion Mitilineu, Charles Hirschler, Nicolae Hiott and Ludwig Würzburger were assigned to manage the company in the following year. Misters Constantin Găgiulescu, Anastasie Petrescu and F.H. Koster were appointed censors for the financial year 1938, whilst I. Constantinescu, V. Coşma and Octav Ioan were appointed acting censors. On May 2, 1938, Ion Mitilineu was elected President of the Managing Board.[64]

10 stakeholders, owners of 4,900 shares, participated in the meeting. The assembly unanimously approved the statement of assets and liabilities and the profit-and-loss account, deciding to allocate the following sums from the net profit: 397,000 lei to the statutory emergency fund; 3,250,000 lei for establishing an emergency fund for the attenuation of questionable outstanding debts, "to proceed towards the clearance of debts whose value is questionable"; and 60,000 lei for the censors' payment in the year 1937. The rest of 261,506 lei was carried over to the following financial year.[65]

The Company spent, in the year 1937, 12,380,425 lei for salaries, ex-gratia payments, telephone, telegraph, rents and offerings, and only 1,313,446 lei for taxes. The 1937 net profit amounted to 321,506 lei, and according to the internal review, the profit-and-loss account of Bunge S.A.R. in 1937 amounted to 17,956,028 lei.[66]

In December 1937, a government led by Octavian Goga is appointed, a moment which marks the opening the path to King Carol II's royal dictatorship and the legitimation of the anti-Semitic trend in Romania. In order to comply

62. SJAN Brăila, fund Camera de comerţ Brăila (structural part *Firme sociale*), file B 136/1930, 45.

63. Ibid, 48; and *Monitorul Oficial*, 70, 1936.

64. SJAN Brăila, fund *Camera de comerţ Brăila* (structural part *Firme sociale*), file B 136/ 1930, 50-51.

65. *Monitorul Oficial*, May 3, 1938: 4418.

66. Ibid, 4419.

with Romanian laws, and to avoid certain inconveniences from the authorities in Bucharest, foreign companies hastened to appoint Romanian ethnics as managers of their branches in Romania.[67]

During the Managing Board assembly on June 25, 1938, Adrian G. Petcu was appointed company manager, with the possibility to engage the company by signing alongside a delegate administrator or another director. Misters P. Groswald, I. Rosenberg and M. Siberdi were appointed vice-managers, having the right to signature in accordance with the company's statutes.[68]

After the annexation of Austria and occupation of Bohemia and Moravia by Nazi Germany in 1938 and 1939, Europe was preparing for a new war, whose consequences were to certainly affect the business carried out in the Danube ports.

During the General Assembly of April 20, 1939, the Managing Board for the financial year 1939 was elected: Ion Mitilineu, Nicolae Hiott, Charles Hirschler and Ludwig Würzburger. Constantin Găgiulescu, Anastase Petrescu and F.H. Koster were appointed censors, whilst Ioan Constantinescu, V. Comşa and Octav Ioan were appointed acting censors.[69] The assembly decided that, out of 395,968 lei net profit in 1938, to allocate 10% (39,500 lei) for the statutory emergency fund, and the amount of 90,000 lei as tontine for the Managing Board. The censors' payment was set to 60,000 lei, and the remainder of the profit (205,568 lei) was carried over to the next financial year. Salaries, gratuities, telephone and telegraph bills, rents and offerings amounted to 11,348,380 lei in 1938, whilst taxes paid in compliance with Romanian legislation amounted to 1,133,201 lei.[70]

During the meeting of April 30, 1939, the Managing Board appointed Ion Mitilineu president of Bunge S.A.R., also retaining the delegations of the two delegate administrators, Charles Hirschler and Ludwig Würzburger.[71]

After Ludwig Würzburger's death, the Managing Board of the company decided, on October 28, 1939, to replace him with Constantin V. Hiott as a delegate administrator. During the same meeting, the board recorded Max Eisenburg's stepping down from his managerial position.[72] At the end of November 1939, Bunge S.A.R. Managing Board was "pleased to be informed of Mr Max Eisenburg's reversing his resignation; consequently, he recommences, as of today,

67. Lya Benjamin, *Legislaţia antievreiască (*Bucharest: Hasefer Press, 1993).

68. SJAN Brăila, fund *Camera de comerţ Brăila* (structural part *Firme sociale*), file B 136/1930, 57; and *Monitorul Oficial*, July 4, 1938: 6803.

69. SJAN Brăila, fund Camera de comerţ Brăila (structural part *Firme sociale*), file B 136/1930, 61.

70. *Monitorul Oficial*, May 6, 1939: 4248.

71. SJAN Brăila, fund *Camera de comerţ Brăila* (structural part *Firme sociale*), file B 136/1930, 63.

72. Ibid, 74; and *Monitorul Oficial*, November 3, 1939: 9367.

November 29, 1939, to act as our company manager, being permitted to validly engage the company"[73].

On October 4, 1939, the President of the Chamber of Commerce and Industry of Brăila, with consideration to the application submitted by Max Eisenburg (domiciled in Brăila, 16 Coroanei Str.), issued a certificate to serve the pleader's interests in his business journey to Chile. The document supported him in obtaining a visa and the necessary currency for his journey to South America. The same certificate stated that Max Eisenburg "has a very good reputation on the trade market of Brăila port, being also decorated with the Commercial and Industrial Merit, rank I, thanks to his position as the manager of Bunge S.A.R., which he has held since 1931.[74] A similar certificate was issued by the manager of Brăila County Chamber of Agriculture. This latter document mentions "the vast knowledge that [Max Eisenburg – *o. n*.] possesses in the field of cereal export, [in which] he asserted himself as a valuable and worthy element, contributing to the intensification of exports and capitalization of our agricultural products on foreign markets, as the company he is managing reaches the highest quantities of exported cereals"[75].

At the beginning of WWII, Romanian authorities imposed a number of measures meant to attest the managerial abilities and the minimal loyalty to the Romanian State of a trading house manager, as most of them were subordinated to foreign partners. On February 26, 1940, Max Eisenburg[76] submitted to the Office of Brăila Trade Register a number of documents required for his carrying out his activity as manager of Bunge S.A.R: a certificate issued by the Chamber of Commerce and Industry (October 1939), a certificate issued by Chamber of Agriculture of Brăila County (October 4, 1939) (both proving that he had experience in cereal exports); and a certificate issued by the Service for Identification and Criminal Record, which attests that he was never sentenced for any deed provided by law in carrying out the activity of cereal merchant. In what his studies were concerned, he could not provide any certificate of completion, "because I studied abroad, where I have certificates that I cannot submit at this moment because of the current events [WWII – *o. n*]". At the same time, he declared that he knew the Romanian language "writing, speaking and reading, meeting the minimal requirements provided by Art 2 of the abovementioned law [Art. 2 of the Law for completing the public Trade Register, published by the Official Gazette nr. 292/ 1938 – *o. n*]"[77].

73. SJAN Brăila, fund Camera de comerț Brăila (structural part *Firme sociale*), file B 136/1930, 77.

74. Ibid, 79.

75. Ibid, 81.

76. Born in Germany, according to a certificate issued by the Service of Identification and Criminal record, Brăila, October 1939, see ibid, 80.

77. Ibid, 78.

The General Assembly held on March 10, 1940 elected the Managing Board of the company for the financial year 1940: Ion Mitilineu, Nicolae Hiott, Charles Hirschler and Constantin Hiott. C.I. Găgiulescu, Eugen Stănescu and P.H. Koster would exercise their attributions as censors, whilst I. Constantinescu, V. Comşa and P.N. Sint were appointed acting censors (Table 1). The Managing Board unanimously decided to "appoint Mr Ion Mitilineu as president and retain the delegations of Mr Charles Hirschler and Mr Constantin Hiott, as delegate administrators".[78] The registered share capital of the company was split into 5,000 shares.[79] The 1939 balance sheet indicates expenses with salaries, rents, insurance payments and others of 6,398,915 lei and 1,802,077 lei paid to the Romanian State as tax.[80] The 1939 deficit was declared in the amount of 1,763,685 lei, whilst the loss in 1940 amounted to 9,238,995 lei.[81]

In the spring of 1940, Nazi Germany occupied several states in Western Europe. On May 10, 1940, the Third Reich troops invaded the Netherlands, and on May 15, the Low Countries government signed their capitulation. Queen Wilhelmina had already found refuge in London.

78. Ibid, 83.
79. *Monitorul Oficial*, March 29, 1940: 2755.
80. Ibid.
81. *Monitorul Oficial*, March 12, 1941: 2004.

Table 1. *Members of the Managing Board and Censors on the Financial Year 1940*[82]

Nr. Crt.	Name and surname	Position	Nationality	Domicile	Capacity
1.	Ion Mitilineu	president	Romanian	Bucharest	President of the Managing Board
2.	Nicolae Hiott	advisor	Romanian	Bucharest	delegate administrator
3.	Charles Hirschler	delegate administrator	Dutch	Amsterdam	delegate administrator
4.	Constantin Hiott	delegate administrator	Romanian	Brăila	delegate administrator
5.	C.I. Găgiulescu	censor	Romanian	Brăila	censor
6.	Eugen Stănescu	censor	Romanian	Brăila	censor
7.	I. Constantinescu	acting censor	Romanian	Bucharest	acting censor
8.	V. Comşa	acting censor	Romanian	Bucharest	acting censor
9.	F.N. Sint	acting censor	Dutch	Amsterdam	acting censor

Because of the hindered relations with the parent-company, corroborated with the territorial losses of Romania (mainly the agricultural basin from Bessarabia), as well as the complete impossibility of carrying out export activities, owing to the measures taken by the belligerent countries, which prevented the cereal exports to traditional trading partners, and in compliance with the provisions of the Commercial Code, which stated that a company was dissolved when its capital had been lost, Bunge S.A.R. ceased their activities completely as of July, 1940.[83] Following the censors' review on November 11, 1940, it was asserted that the entire registered capital had been lost. At the same time, manager Ion Mitilineu handed in his resignation in October 1940. As of January 1, 1941, the following were managing the company: Nicolae Hiott (Board member), Constantin V. Hiott (delegate administrator) and P. Grosvald (vice-manager).[84]

Ministry of National Economy approved the application formulated by the company to commence the dissolution procedures.[85] On March 6, 1941, the

82. SJAN Brăila, fund *Camera de comerţ* Brăila (structural part *Firme sociale*), file B 136/ 1930, 84.

83. *Monitorul Oficial*, 60, part II, March 12, 1941: 2003.

84. SJAN Brăila, fund *Camera de comerţ Brăila* (structural part *Firme sociale*), file B 136/ 1930, 95.

85. Ibid, 92-93.

General Assembly decided the dissolution of Bunge S.A.R., appointing a lawyer from Brăila, Constantin Hiott, as official receiver. He was allowed to sell the company's movables and was entitled to act in the name of the company without prior consent of the Managing Board. His wage was to be determined during a subsequent meeting.[86]

From the company's accounting audit, one notes the amount of current expenses with salaries, correspondence and rents – 8,330,279 lei, and the total amount of taxes paid to the Romanian State: 2,017,360 lei. A sum of c. 600,000 lei was spent for furniture purchases and "other expenses".[87]

On May 2, 1941, the Chamber of Commerce and Industry of Brăila and the Office of Trade Register concluded the review procedure, determining that Bunge S.A.R. did not contravene the decree-law on the juridical state of Jews in Romania. The activity of the lawyer, Constantin V. Hiott from Brăila, the company's official receiver, did not fall under the provisions of the law published in the Oficial Gazette nr. 183/ 1940 on the juridical state of Jews in Romania.[88]

In response to the written request of the Chamber of Commerce and Industry of Brăila, the official receiver of the company Bunge S.A.R. filled out a standard questionnaire with 10 questions, addressed to all companies at that time. For the first question, he answered that the company was in the process of dissolution and that its core business had consisted of commissioning and exporting cereals, and that its headquarters was located in Brăila. The other answers indicate that the company had been constituted as a joint-stock company, with an initial registered capital of 5 million lei, divided into 5,000 shares. He could not provide specific information on the state of the shares, considering the belligerency, but, since its foundation, the company had been under the tutelage of the multinational company N.V. Bunge's Handelmastschsppij from Amsterdam, the Netherlands. The Romanian company had been declared bankrupt since March 6, 1941. The dissolution did not leave any shares to stakeholders, and the debts to third parties could not be covered.[89]

The judge delegated to the Trade Register of Brăila, taking into consideration the determinations made by the director of the Office, proceeded to deregister, *ex-officio*, the company Bunge S.A.R, in compliance with the provisions of Art 14 of the law for the establishment of a trade register, which stated that deregistration of a company could be pursued ex-officio when the management had stopped all trade activities. Aside from these provisions, the delegate judge also grounded his

86. *Monitorul Oficial*, 60, part II, March 12, 1941: 2003.

87. Ibid, 2004.

88. SJAN Brăila, fund *Camera de comerț Brăila* (structural part *Firme sociale*), file B 136/ 1930, 101.

89. Note by Constantin V. Hiott, official receiver, to the Chamber of Commerce and Industry, Brăila, ibid, 132.

decision on the Order of the Ministry of Industry and Commerce nr. 49190/ October 15, 1947.[90]

Nidera in Romania

The significant growth recoded in cereal maritime trade at the mouths of the Danube had effects on the local market, one being the multiplication of international agencies established on Misitiilor Street, Brăila.[91] In June 1932, the Official Gazette published the charter and statutes of the company *Portera Societate Anonimă Română*, founded for "cereal trade and commission", with the headquarters in Brăila. The first Managing Board of this company comprised Siegmund Mayer-Wolf (president), George Portolo (delegate administrator), Adolph Kühneberg (administrator), Carl Joseph (director) and G. Lazaropol (manager).[92] Siegmund Mayer-Wolf (German from Hague), George Portolo (Greek from Brăila), Nicolae T. Petrescu (Romanian from Brăila), Adolf Kühnberg (Romanian from Brăila) and Julius Levy (German from Rotterdam) were appointed to manage and/or represent the company in its early months as associated censors, administrators and third parties.[93]

Unlike other branches or local companies affiliated to important players on the global market, the Nidera outpost in Brăila did not benefit from a well-defined system in the fluvial Danube ports to maintain the collection of grains from producers from Oltenia and Wallachia and to deal with what it took to ensure the in-shore navigation to the port in Brăila. Therefore, Portera S.A.R. just aimed to be a means of entering the Danube cereal market, in hope of a time propitious to the development of an entire network specific to the distance-exchange game in the world of warehouse trade and used by the trading houses established in the ports on the Danube ever since mid-19th century.

On April 16, 1934 George Portolo (domiciled in Brăila, 16 Praporgescu Str.), attorney of Portera Company, requested the complete deregistration of the company, mentioning that any trading activity had ceased starting with January 1, 1933. Though short, the history of the branch from Brăila illustrates the interest of a global company in a hinterland in decline in the '30 of the last century. The interests of the Dutch company were in competition with those of the much more famous Dutch company Bunge and of the French from Louis Dreyfus & C-ie.

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90. Ordinance nr. 60/ January 26, 1948" of the judge delegated to the Trade Register Brăila, ibid, 138.

91. See S. Semilian, *Anuarul economic al municipiului Brăila pe anul 1933 (*Brăila: Tipografia Românească, 1933).

92. See *Monitorul Oficial*, June 1, 1932.

93. SJAN Brăila, fund *Camera de comerț Brăila* (structural part *Firme sociale*), file P 13/ 1932, 1.

Alongside Portera, many other companies specialising in cereal exports functioned in 1932 in Brăila. To mention a few*: Compania Continentală de export S.A.R., Cerealia, Jacques Deutsch & C-ie, G. & F. Grupper S.A.R., J. & M. Hailpern S.A.R., Internationale Getreide Handels A. G. din Viena, Schilthunuis & C-ie S.A.R., Sodac, Anglo – Britanica de cereale S.A.R., Cerealea S.A., Compania Continentală de Export S.A., Comitrom S.A., Comerţul Românesc, Exportul Cerialelor S.A.R., G. – Co. F. Gruper, Maritima S.A.R.*, etc.[94].

Law 119/ June 11, 1948 for the nationalisation of industrial, banking, insurance, mining and transportation enterprises was the legislative means by which the new party and state rulers from Bucharest translated the Moscow directives of turning Romanian economy away from the patterns and horizons opened by Western capitalism, to the "benefactions" of centralised economy. The law also gave the green light for the collectivisation of Romanian agriculture, which was still the primary engine of the national economy. The elimination of capitalist elements from the economic system of Eastern Europe also entailed the elimination of the great trading houses from the Black Sea area, companies that had been forced to find opportunities in the region, after the Bolshevik Revolution of 1917, only in the Romanian and Bulgarian grains and the oil on Prahova Valley.

Conclusion and Present-Day Perspectives

After a more than five-decade break, the merchant interests in trading, storing and processing seeds for oil, the production of oil destined for consumption and the fertilizers production of Bunge led to their reopening a branch on the Romanian territory in 2002. By the acquisition, at the world level, of the French group Cereol Holdings in 2002 and of two factories, Interoil and Muntenia from Romania, Bunge became a leader by the gradual growth of two important brands that they own in Romania: Floriol and Unisol.[95] In 2008, Bunge became the world's greatest player on the seed processing market, and the third most important player at the global level in the agricultural sector, after Cargill and Archer-Daniel-Midland.[96] The Romanian media informed that the leader of alimentary oil on the Romanian market owed c. 90 million lei to the Romanian State, but continued to be well-integrated on the specialised market in the Danube hinterland.

In 2015, 13 years since the opening of an office in Bucharest, trader Nidera occupied for the first time the first rank among the greatest cereal exporters from Romania. The company founded in 1920 in Rotterdam outperformed important names on the world market of agro-alimentary products, such as ADM and

94. Ibid, files: C2/1931, C7/1932, C18/1924, C41/1932, C44/1931, E3/1937, F7/1932, G3/1928 and I6/1923.

95. See: http://www.zf.ro/wikizf/bunge-romania-s.r.l.-10107039.

96. See: https://bit.ly/3NfVeLD .

Ameropa. In just six years, Nidera became one of the most important players on the cereal trade market in Romania. The company's rate of turnover recorded an increase from 194 million lei in 2009 to 1,188 million lei in 2014. The company budget reached 2,146 million lei in 2015, which allowed them the most important transaction on the local agricultural market, with the acquisition of United Shipping Agency (American capital), in exchange of c. 100 million euro. This business allowed their purchasing of the largest terminal for grain exports in Constanţa port, with a storing capacity of 250,000 tons.[97] In the spring of 2017, Romania became the main European cereal exporter to the European Union, outperforming states with territories and exploitation potentials superior to those existing in Oltenia, Muntenia, Dobruja and Moldavia.[98] The Chinese from COFCO, among the most important international players on the market of acquisition and fusion of companies in the agricultural sector, purchased the majority stock of Nidera Company in April 2017, putting an end to a 97-year history.[99] The cereal producers in the area of the mouths of the Danube have reintegrated on the specialized international market in a capitalist manner.

Bibliography

Axenciuc, Victor. "Evoluţia economică a României. Cercetări statistico-istorice 1859–1947." (The Economic Evolution of Romania. Historical-Statistical Research.) In *Agricultura,* volume II. Bucharest: Editura Academiei Române, 1996.

Bădescu, Valentin-Stelian and Cosmin Iordache. "Scurt istoric al evoluţiei Dreptului Comercial." (A Short History of the Evolution of Commercial Law.) *Buletinul Universităţii Naţionale de Apărare Carol I* 1 (2013): 280-289.

Benjamin, Lya. *Legislaţia antievreiască.* (*Anti-Jewish Law*.) Bucharest: Hasefer Press, 1993.

Block, H. and A. Cândea. *Calendarul Basarabiei pe 1931.* (Bessarabian 1931 Calendar.) Chişinău: Tipografia Eparhială "Cartea Românească".

Bozga, Vasile. *Criza agrară în România dintre cele două războaie mondiale. (*The Agrarian Crisis in Romanian between the Two World Wars.) Bucharest, 1975.

Brăila County Service of the National Archives of Romania (abbreviated SJAN Brăila), fund *Camera de comerţ* [*Chamber of commerce*] *Brăila* (structural part *Firme sociale*).

Buşă, Daniela. "Spaţiul sud-est european şi realităţile sale economice (sfârşitul secolului al XIX-lea – începutul secolului al XX-lea)." (South-Eastern Space and its Economic

97. Roxana Rotaru, *Nidera a ajuns pe prima poziţie la vârful celor mai mari exportatori de cereale din România* (Ziarul Financiar, April 18, 2016).

98. Adrian Negrescu, *The Romanian Agriculture Hits Record After Record. The Grain Producing Business has Doubled in the Past Seven Years* (KeysFin, June 20, 2017).

99. "We are embarking on a journey to build on the past and to embrace the future, for the bases of a new company built on the solid foundation of COFCO Agri (ex. Noble Agri) and Nidera", declared Johnny Chi, CEO al COFCO *International*. See Gabriel Razi, *Chinezii pun capăt unei istorii de afaceri de 97 de ani. Brandul Nidera a dispărut oficial. Traderul deţinut de chinezi activează acum sub numele COFCO International* (Agrofinanciar, April 25, 2017).

Realities (The End of the 19th Century – The Beginning of the 20th Century.) *Studii şi Materiale de Istorie Modernă* 15 (2002): 50-51.

Celebidachi, H. "Agricultura." (Agriculture.) In *Basarabia. Monografie*, edited by Ştefan Ciobanu. Chişinău, 1993.

Constantin, Cristian. *Comerţul cu cereale la Gurile Dunării: integrarea pe piaţă, structuri productive şi infrastructura de transport (1829–1940).* (The Grain Trade at the Mouths of the Danube: Market Integration, Productive Structures and Transport Infrastructure (1829–1940).) Brăila: Istros, 2018.

Enciu, Nicolae, *În componenţa României Întregite. Basarabia şi basarabenii de la Marea Unire la notele ultimative sovietice.* (Within Romania Made Whole. Bessarabia and Bessarabians from the Great Union to Soviet Ultimatum Notes.) Bucharest – Brăila: The Publishing House of the Romanian Academy, Istros, 2018.

Georgescu, M. *Reforme agrare. Principii şi metode în legiuirile române şi străine.* (Agrarian Reforms. Principles and Methods in Romanian and Foreign Legislations.) Bucharest: Tipografia Bucovina I.E. Torouţiu, 1943.

Georgescu, M. and P. Sterian. "Comerţul Interior." (Foreign Trade.) In *Enciclopedia României*, IV, 423-424.

Georgescu-Roegen, N. "Inventarul agricol." (Agricultural Tools.) In *Enciclopedia României*, IV, 340-342.

Giurescu, C. C., M. G. Romaşcanu and N. Georgescu–Roegen. "Comerţul Exterior." (Foreign Trade.) In *Enciclopedia României*, IV, *Economia naţională: circulaţie, distribuţie şi consum*, 371. Bucharest: Imprimeria Naţională, 1943.

Iacubovici, Barlo. "Raţionalizarea agriculturii basarabene." (Rationalization of Bessarabian Agriculture.) *Basarabia economică* 2 (1938): 9-10.

Lungu, Const. I. and T. Al. Ştirbu. "Basarabia economică." In *Basarabia economică. Monografie*, edited by Ştefan Ciobanu. Chişinău, 1993.

Lupan, Horia N. "Cercetări asupra preţului şi rentei pământului în România." (Research on Price and Land Annuity in Romania.) *Analele Institutului de Cercetări Agronomice al României* 5 (1933): 253.

Madgearu, Virgil N. *Evoluţia economiei româneşti după războiul mondial* (The Evolution of Romanian Economy After the World War.) Bucharest: Editura Ştiinţifică, 1995.

Manuilă, S. and D. C. Georgescu. *Populaţia României*. (The population of Romania.) Bucharest: Monitorul Oficial şi Imprimeria Naţională, 1937.

Maxim, Vasile. "Unele aspecte geopolitice legate de infrastructura căilor de transport din Basarabia." (Some geopolitical aspects related to the transport infrastructure in Bessarabia.) In *Politica marilor puteri în Balcani şi Europa Centrală*, *Proceedings of the International Symposium, October 10-12, 2013*, edited by Nicolae Chicuş, 404-406. Chişinău: Garamont–Studio.

Miclescu, I. and V. Mişicu. "Căile ferate române." (Romanian Railroads.) In *Enciclopedia României*, IV, 53.

Mocanu, Emil Octavian. *Portul Brăila de la regimul de porto franco la primul război mondial (1836–1914).* (Brăila Port from the Port-Franc Status to World War I (1836-1914).) Brăila: Istros, 2012.

Murgescu, Bogdan. *România şi Europa. Acumularea decalajelor economice (1550-1950).* (Romania and Europe. Accumulation of Economic Gaps.) Iaşi: Polirom, 2010.

Negrescu, Adrian. *The Romanian Agriculture Hits Record After Record. The Grain Producing Business has Doubled in the Past Seven Years*. KeysFin, June 20, 2017.

Plesnilă, Ion. *Istoricul liniei Galaţi – Bârlad.* (History of Galati-Barlad Railway.) Bucharest: Tipografia Gutenberg, 1898.

Popa-Vereş, M. *Comerţul nostru de cereale sub aspectul vieţii economice româneşti. (*Our Cereal Trade Under the Aspects of Romanian Economic Life.) Bucharest, 1938.

Rădvan, Laurenţiu. *Oraşele din Ţările Române în Evul Mediu: sfârşitul secolului al XIII-lea – începutul secolului al XVI-lea. (*Towns in the Romanian Provinces in the Middle Ages: The End of the 13th – The Beginning of the 16th Century.) Iaşi: "Al. I. Cuza" University Press, 2011.

Razi, Gabriel. *Chinezii pun capăt unei istorii de afaceri de 97 de ani. Brandul Nidera a dispărut oficial. Traderul deţinut de chinezi activează acum sub numele COFCO International*. (The Chinese Put an End to a 97-year Business History. The Nidera Brand Has Officially Disappeared. The Chinese-owned Trader Now Operates Under the Name COFCO International.) Agrofinanciar, April 25, 2017.

Rotaru, Roxana. *Nidera a ajuns pe prima poziţie la vârful celor mai mari exportatori de cereale din România*. (Nidera Reached the First Position at the Top of the Largest Grain Exporters in Romania.) Ziarul Financiar, April 18, 2016.

Semilian, S. *Anuarul economic al municipiului Brăila pe anul 1933. (*Economic Yearbook of the City of Brăila, 1933.) Brăila: Tipografia Românească, 1933.

Sterian, P. "Comerţul interior în România." (Internal Trade in Romania.) *Sociologie Românească* 46 (1938): 164.

Stöhr, Rudolf and Klaus Schumacher. *The History of the European Grain Market*. Brussels: Coceral, 2008.

Teodorescu, I. "Basarabia." (Bessarabia.) *Buletinul Statistic al României* 15, no. 1 (1919): 22-28.

Ţurcanu, Ion. *Relaţii agrare din Basarabia în anii 1918-1940. (*Agrarian Relations in Bessarabia in the Years 1918-1940.) Chişinău: Universitas, 1991.

Veverca, Ion, Virgil Madgearu and Petre Constantinescu. "Politica comerţului exterior." (Foreign Trade policy.) In *Enciclopedia României*, IV, 438-439.