



Orbis Mediaevalis
II

*Inter tempora.
The Chronology of the
Early Medieval Period*

Issues, Approaches, Results

*Inter tempora.
Cronologia perioadei
medievale timpurii*

Probleme, abordări, rezultate



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Considerations Regarding the Archaeological Chronology and the Dating of Early Medieval Settlements in the Bărăgan Plain (8th–11th Centuries)*

Emilia Corbu

Abstract: *The study synthesizes the current state of research of the issue and briefly exposes the archaeological dating methods of a few early medieval settlements from the Bărăgan Plain. The cultural method, the typological method, the topostratigraphic method, the historical or event method, as well as interdisciplinary methods inspired by contemporary technology are mentioned. Part of them are exemplified through the situation of the Vlădeni “Popina Blagodeasca” site. The majority of the settlements evidenced through survey were dated using the cultural method. The typological method is based upon the description of the archaeological inventory and its correlation with coins, ornaments or weapons as artefacts with increased chronological expression. An important aspect concerns the statistics of fragmentary ceramic material. It has been noted that the proportions attributed to the different categories are very close in the complexes which functioned simultaneously. An example is the grey ceramics which was found in great percentages in earlier complexes. The topostratigraphic method dates the level or complex according to superpositions or intersections and complexes dated with key artefacts. It is useful in establishing the evolution of the settlement, but less for an exact chronological classification. At Vlădeni “Popina Blagodeasca”, the archaeomagnetic method was used to date two archaeological complexes classified at different levels. In the first case, the archaeomagnetic dating confirmed the typological dating. In the second case, the topostratigraphic dating was denied. The realization of monographic studies of the archaeological inventories, the dating based on modern technology, as well as the extension of the database of absolute chronology through interdisciplinary studies, would contribute greatly to solving archaeological chronology issues. Regarding the inventory monographs, a balance is made of the results of the ceramic studies carried out until now and raises the problem of comparative studies of contemporary cultures (Dridu, Saltovo-Mayaki and the environment of the First Bulgarian Empire).*

Keywords: *dating methods in archaeology, cultural dating, typological dating, ceramics statistics, event dating, archaeomagnetic dating, absolute dating, relative dating, Dridu culture, the First Bulgarian Empire, the Saltovo-Mayaki culture, the Bărăgan Plain.*

The Bărăgan Plain stretches across the present-day territory of the Brăila, Ialomița and Călărași counties, also being bordered south and east by the Danube, west by the Mostiștea valley and north by the Buzău river (fig. 1). The current state of research indicates two points of imbalance. The first refers to the great number of settlements, against with the poverty of the inventory. However, it cannot be absolute as long as the research is incomplete in most sites. The second one is an imbalance of historical information. That is to say, for the 5th–7th centuries, in relation to which we dispose of written information, we do not have archaeological finds, whereas for the 8th–11th centuries, although there are numerous archaeological finds, too little literary information can be used. At 15 sites, surveys as well as preventive and systematic excavations were carried out which prove the undoubted presence of some settlements¹. Of these, only five excavations were large.

* English translation: Alina Piticar

¹ Corbu 2006, 41–43.

(1) The cultural method were used to data a lot of sites. It was applied for the sites that were highlighted following investigations on the surface of the soil. It were data from 8th–11th centuries, based especially on ceramic fragments and usually being referred to as the Dridu culture. It is conjunctural dating; as such, these sites cannot enter a study regarding chronology or cultural evolution (Fig. 1).

(2) The typological method was based on the comparison of the archaeological inventory and the detection of possible analogies. The specialists focused their attention upon ceramics and metal artefacts. This procedure was applied to all the archaeological sites researched either systematically or salvaged, but also to some isolated finds. For example, the Borcea potter's oven, an extraordinary discovery related to ceramic production in the north of the Danube was dated to the 10th–11th centuries based on ceramic fragments discovered around the oven². The method can deliver good results for a settlement on a single archaeological layer, but the typological dating becomes problematic in the case of pluristratified settlements. To surmount this deficiency, the organization and description of ceramic material must be as precise as possible, which has not always been the case. The procedure of looking for analogies was applied differently, the specialist's effort often being sustained in the circle. Some archaeologists have dated the sites of the Romanian Plain by analogy with others from the same area. Others also looked for parallels in other regions of Romania, while occasionally some analogies were followed in Dobrogea (look upon Byzantine territory) as well as in Eastern Europe until Don river (but such approaches appear more likely as exceptions).

The majority of those interested oriented themselves towards the next-door. For example, a large settlement such as the one at Fetești "Vlașca" (Ialomița county), with 16 dwellings, was chronologically positioned by analogy with the one from Căscioarele (Călărași county). There where a few complexes spread out in five points had been discovered at Căscioarele, finds dated, in turn, only by analogy to sites from the Romanian Plain. The Fetești settlement offered a much more complex situation than Căscioarele and many more dating elements, but the latter settlement was nearby, and the accuracy of the report was impressive as a result. The Bucu settlement is dated by analogy with the one from Dridu, while the famous eponymous settlement is typologically dated after the results from Dinogetia. Dating after the Dinogetia site is not a mistake because the site is located 50 km from Brăila, which marks the northern limit of the Bărăgan. The Brăila area had previously had direct roads towards the villages on the Danube ponds line as well as towards the villages in the Ialomița river valley. Even so, the evolution of Dinogetia, as a citadel, was different compared to that of a rural settlement. Rural settlements can precede fortifications, while the latter require a certain historical context to establish and evolve.

I have also applied the typological method, following analogies in extended cultural spaces but I have not always been satisfied with the results. For this reason, I have tried to improve this procedure by using statistics on categories of ceramic material, a method used since the '50s of the past century in the entire archaeological world. I applied it to Vlădeni "Popina Blagodeasca" and I observed that the results were positive, indicating without doubt the archaeological complexes which functioned simultaneously. Thus, even though in one complex 100 ceramic fragments may be found, while another may have 500, the percentages of each ceramic material category will be almost identical in the case in which the two were contemporary. Four technological categories were noted: sandy paste fragments (generally specific to the early Middle Ages), fragments of a fine grey paste, polished, both categories modeled on the wheel; hand-made pottery; ceramics made of quality paste, well fired (oxidation, up to red) as pots, jugs, amphorae. On the site of Popina Blagodeasca, there are three big objectives: the early-medieval settlement; the defensive system; some daco-getae archaeological complexes. With regards to the early-medieval settlement, statistics was applied to inventory of each complex and then comparisons were made. The procedure

² Papasima, Oprea 1984, 240.

was the same in the case of the Getic complexes, which are much earlier. In the case of the early-medieval settlement, the results indicate a percentage of 50–60% sandy ceramics and approximately 10% grey ceramics, and, on average, 20% red ceramics. It is a situation with parallels with other settlements of the period. For the Getic features, the statistics indicate a percentage of 70% hand-made pottery.

Dating of defensive-system on the inventory is a challenge. Generally, the chronological classification of fortifications is difficult, for intrinsic reasons. We can mention here: their temporary usage, the location outside of settlements, the change of their functionality, and as a result the poor and disparate inventory. As in other places, the inventory of the “Popina Blagodeasca” defensive-system is very poor, with very fragmentary ceramic material which cannot be reconstituted. With the exception of sandy and grey ceramics made on the hand-wheel, which are specific to the 8th–10th centuries, the other two categories appear in all the historical periods, from the Getae, up to the 11th century.

The statistics of the inventory was carried out for each section (trench) in which the defensive ditch were discovered. The results suggest unique characteristics. The first important observation was that the material reflects the stratigraphic situation of the place. That is to say, in the area in which the ditch was crossed by the early-medieval settlement, early medieval ceramics was found, while in the area in which the ditch destroyed Getic features, we find materials that are specific to the period. However, the chronological classification between the Getic period and the 9th century is unsatisfying, that is to say very long, over a thousand years.

		Sandy ceramics	Grey ceramics	Red paste ceramics	Handmade ceramics
1	S. E /2006, 2007	7%	11%	32%	50,4%
2	S. F /2007	20%	-	50%	30%
3	S. F/2014 the second ditch	16,31%	11,34%	36,87%	35,46%
4	S. G/2011-fossatum	55%	22,37%	21,76%	-
5	S I/2013	58%	14,3%	23%	5,5%
6	S G c. 11–15, Cas. A53, SK the second ditch	48,55%	15,89%	20,52%	15%
7	S. H /2012, 2013	50,12%	13,88%	23%	12%
8	SM, c. 5–9/2016 Fossatum	47,24%	15%	10,23%	26,27%

Tab. 1. The settlement from Vlădeni “Popina Blagodeasca”, Ialomița country. The defensive ditch, proportions of the ceramic categories. S. = trench. Cas. = area. c. = square

The second ascertainment which can support the chronological classification is the great percentage of the grey ceramics and the red paste ceramics. The proportion is much greater than in the early medieval settlements and in the Getic ones. The grey ceramics has an average of 15% (between 11–22%), while the red ceramics has an average of 30% (percentages between 10–50%). In other words, in these categories we will also find the ceramic specific to the time period in which the defensive system was functioning. A parallel could orient towards the environment of the 6th–7th centuries settlements, in which the red fabric and grey fabric ceramics were simultaneously used. If we add typology criteria to this hypothesis, such as hand-made fragments of bowl with a lip lightly curved towards the inside or a paste containing sand and chalkstone, then this chronological classification could be confirmed³.

Nevertheless, the typological classification did not stop here, attempting to date the defensive system type. The Byzantine military treatises describe ten types, of which only three used walls. This aspect is very important, since Romanian archaeological literature emphasizes the wall more than the ditch. It is worth remembering that only the Byzantines used the ditch during that period, as the Persians used ditch-trenches only during battles; such defensive ditches are not

³ Corbu 2019, 355–373.

known for other populations. The precious details offered by the Byzantine strategists could support the hypothesis that the Vlădeni “Popina Blagodeasca” defensive system is a stronghold raised in enemy territory or on the periphery in view of or during a military conflict⁴.

(3) The topostratigraphic method was applied only at the systematically researched sites in which the repeated intersection of archaeological complexes was observed. The method only indicates the evolution of a settlement, the chronology being established on the basis of the typology of the inventory. Sometimes, archaeologists consider that the chronological interval between two levels can be of one century. Thus, if a typologically-dated level from the 9th–10th centuries exists, an intersecting complex could be placed in a level of the 10th–11th centuries. The procedure can create errors, as shown by Eugenia Zaharia. One of the best topostratigraphic classifications was made for Capidava by the regretted Radu Florescu, and it is based particularly on stratigraphic sequences⁵. The topostratigraphic dating was difficult for Dinogetia as well since the oldest level of early medieval occupation disturbed the Roman-Byzantine layer, and the newer levels of the early-medieval habitation disturbed the previous ones. Intercrossing caused many pieces to reach a secondary position. Furthermore, the early medieval settlement is located on an uneven surface. For this reason, the depth at which the materials were recorded is a relative one⁶. Nevertheless, topostratigraphic dating offers some security for when two completely different complex categories intersect, such as a necropolis superposing a settlement. The culture layer from “Popina Blagodeasca” is rather thin (between 10–25 cm), being more consistent in the complex portion. The conclusion would have been that only one occupation level exists, if only one salvage excavation would have taken place on a restricted surface. In reality, the great number of complexes identified in superposition relations – cottages intersected by domestic ovens and food storage pits, palisade pierced by cottages and pits – led us to conclude the existence of three different levels. In conclusion, the topostratigraphic situation helps to establish an evolution of the settlement and of possible events, but less of the dating itself.

(4) The historical or event method was particularly used to date the Byzantine fortresses of Dobrogea. Two great historical realities were dated through an historical event. The first is the Byzantine return to the Lower Danube in 971 linked of appearance and development of fortresses in Dobrogea. The second is suspension of habitation in most rural settlements of the Dridu culture explained by the Pecheneg’s migration. Eugenia Zaharia, as well as Maria Comşa, linked the ending of inhabitation in the Dridu settlement (and of the culture itself) of the Pecheneg invasion, from the beginning of the 11th century. The expert literature put about data 971 and 1025, regarding the Byzantines returns to the Lower Danube and the approximate ones associated with the Pecheneg invasion. These are data and events which are relevant, and the consequences can be found in the Dobrogea archaeological situation. But this relevance seems to not exist for the Bărăgan Plain where all the settlements have the 10th century as a common denominator.

Some settlements suspended their existence in the first half of 10th century, while others begin in the second half of the same century. The situation appears to be somewhat paradoxical because go against to stereotypical scenario accepted by historians and archaeologists, according to which a period of political calm devoid of any bad events favors the stability and development of the settlements. However, the 10th century cannot be characterized thus, quite the opposite. The beginning of the century was marked by the long and warrior 34 year reign of czar Simeon of Bulgaria (893–927), while the second half of the century was marked by the presence of the Pechenegs in the north of the Black Sea and their descent towards the Danube, in front of the Dristra fortress. Consequently, a normal question arises. Either the political situation must have had no effect upon the Bărăgan Plain inhabitation or are some of these chronological dates erroneous? It is possible

⁴ Corbu 2018, 489–495.

⁵ Florescu, Covacef, 1988–1989, 198–247.

⁶ Ştefan *et al.* 1967, 196.

	Settlements	The typological method	Topo strati-graphic method	The cultural method	Method historical documentary	Method Physicochemical	Chronology
1	Baldovinești-Brăila	x	-	-	-	-	11 c. AD
2	Bucu-lalomita	x	-	-	-	-	10–11 c. AD
3	Căscioarele Călărași - “Suharna” - “Suvița-Hotarului” - “La stână” - “La Slom” - “Valea Coșarului” - “Valea Fântânilor”	x					9–10 c. AD
4	Chirnoși-Călărași	-	-	x	-	-	8–9 c. AD
5	Dervent-Călărași						11 c. AD
6	Dridu-lalomita	x	x	-	-	-	10–11 c. AD
7	Fetești-Vlașca – lalomita	x	-	-	-	-	10 c. AD
8	Ileana-Podari – lalomita	x	-	-	-	-	10 c. AD
9	Mănăstirea-Călărași	x	-	-	-	-	10 c. AD
10	Mărculești-lalomita	-	-	x	-	-	9–10 c. AD
11	Piua-Petree lalomita	x	-	-	-	-	10–11 c. AD
12	Ștefan cel Mare – “Feteasca”	x	-	-	-	-	9–10 c. AD
13	Tândărei-lalomita	x	-	-	-	-	10–11 c. AD
14	Vlădeni “Popina Blagodeasca”	x	x	x	x	x	9–11 c. AD
15	Vâlcele-Călărași	x	-	-	-	-	10–11 c. AD
	X-type of method to date from						

Tab. 2. Chronological data methods applied to early-medieval settlements discovered in Bărăgan Plain

that they were only dated from the 9th century, and that in the next century, their evolution would take a different turn. A peaceful period was more likely in the 8th and 9th centuries, if we were to analyze the political history of the area, when the Byzantine Empire had good relations with the Khazar Empire. Only the weakening of the Khazars allowed the Pechenegs to reach the Danube. The presence of the Pechenegs however does not solely mean wars and visible destruction in the Byzantine fortresses. Initially, they only intended to secure the routes specific to their lifestyle as great cattle breeders. From an archaeological point of view, these political changes can be deciphered in the material culture of an area. An unheard diversity of pottery was noted, regarding the fabric, the decoration and the production technique, in a study about the ceramics from the second half of the 9th century and the first half of the 10th century from the Lower Danube. This variety in the pottery field was considered the fruit of a positive cultural evolution, likened to a maturation of the ceramic production⁷. It can also be, however, the result of some insufficiently studied cultural mixtures.

Regarding the dating of the defensive system from Vlădeni “Popina Blagodeasca”, it could be connected to two military events that took place in the Bărăgan Plain. The first one occurred in 594, Priscus’ campaign against a population from the north of the Danube count to be *sclaveni* (the chief Ardagast and king Musokios are mentioned). The war ended with the Byzantines’ victory, lasted from spring until autumn. But real end of war was the revolt of the soldiers against emperor Mauricius, who had asked them to spend the winter in the north of the Danube. The soldiers refused, motivating the wickedness of the inhabitants and the unbearable cold. The second one is tied to the presence of the Bulgars in 684 in Onglos. Although the location of Onglos remains an

⁷ Corbu 2008, 127–140.

unfinished dispute, I have proposed its location in the area of the High Plateau of Hagieni, a geographical oddity located in the midst of the steppe⁸. I am personally inclined towards the second event. As a result, I have correlated the typological method (according to inventory and stronghold type) with event dating for the defensive-system from Vlădeni “Popina Blagodeasca”.

(5) The interdisciplinary methods inspired by contemporary technology should get proper attention. The archaeomagnetic dating method was applied, with the results already published, at the Vlădeni “Popina Blagodeasca”⁹. A problem has been brought by correlation of these results with the typological dating of the ceramics. Two complexes, a cottage and a domestic oven (placed approximately 50 m from each other (on two different levels) given the analysed samples. The cottage was found at the base of a stratigraphic sandwich. The domestic oven crossed a cottage with a stone oven. Typologically and stratigraphically, the cottage was dated to the first half of the 9th century. The oven was dated topostratigraphically to the second half of the 10th century – the first half of the 11th century. My opinion was based upon the Romanian archaeological practice of correlating the level with the century. The archaeomagnetic determinations confirmed the dating of the cottage. The last firing in the oven of the cottage took place in 835 AD. However, the dating proposed for the domestic oven was refuted by almost a century. More precisely, the last firing took place in 885 AD. Consequently, the oven’s level were following the cottage’s level without an abandonment period. Moreover, this was also visible in the stratigraphy of the site where the archaeological levels were fairly thin. Also, the great percentage of grey ceramics proves a similarities: 15% in the cottage and 20% in oven nr. 12 for example.

In their ensemble, the specifications made above refer to settlements. Additionally, there are seven cimitieries of inhumation, incineration or biritual, along with some isolated graves, in Bărăgan Plain. Their dating was carried out typologically, based on the inventory or on the funerary folk customs. The inventory has been found inside a small percent of graves¹⁰. This would explain the attention given to funerary rites. Many archaeologist believe that only the local population of Daco-Roman origins and the Slavs practiced incineration, these attributes pleading for an earlier dating, during the 9th–10th centuries. It was believed that all the Turanians practiced inhumation and for the most part it was the case. Romanian archaeologists never took into account the fact that some of the Pechenegs would incinerate, discussing those who practiced the Madjudzi faith, influenced – we think – by Persian Zoroastrianism. Such groups migrated to the Byzantine Empire, where they are mentioned by the chronicles of the times¹¹. It could mean that incineration was used up to the beginning of the 11th century. Most Pechenegs were Manicheans and were buried. That is reason because I preferred to analysed settlements which, through the diversity of their inventory, offer more dating criteria.

Conclusions. What else is there to do? Two ways are outlined: first, monographic inventory studies, and second, interdisciplinary investigations in the domain of absolute chronology for the development of the chronological basis.

(I) Surely, the detailed examination of the inventory is an important effort for chronological positioning. Monographic studies should start from the stage marked by the investigations carried out by Maria Comşa and Eugenia Zaharia (particularly in the ceramics field), as main sources of long-term inspiration for the archaeology of the Bărăgan area. In 1963, Maria Comşa established and described early medieval ceramics on a chronological axis in a study referring to the Balkan-Danubian culture, a process which remains a model of archaeological approach. She examined overall pottery discovered up to that point on the Romanian territory, but the dating also being based upon other artefact categories: jewelry, arrows and some chirilic alphabet signs.

⁸ Corbu 2013, 168.

⁹ Corbu, Şuteu 2007; Corbu 2013, 154–159.

¹⁰ Corbu 2006, 50–54.

¹¹ Sherbak 1957, 372.

The parallels were found in treasures in Russia, Ukraine and Moldova, as well as in Late-Avar and Moravian cimitiries. The conclusion was the Balkan-Danubian culture were developed during the first decades of the 9th century to the first decades of the 11th century¹². The end of culture would have been brought on by the Pecheneg invasion. Whether, it was recognized or not, we must say that this chronological classification influenced all later dating. It was established in this way the procedure through which the ceramics dates a site; it is not the site which, through its multiple variables, dates the ceramic material.

In the same time, Eugenia Zaharia proposed a dating method that we would categorize today as anthropological namely, one starting from the culture to the chronology. The process consists of first defining a culture with local roots, affixing this culture within the historical events of the period (migrations, foundation of new states, the almost permanent Byzantine culture influence) and, lastly the dating of the sites¹³. In addition, as cultural expressivity, the materials from the cimitiries were separated from the ones in the settlements¹⁴. As in the case of Maria Comşa, the dating of the Dridu settlement itself was based on ceramics, more specifically, on the analogies with the pottery discovered at Dinogetia and Păcuil lui Soare. Subsequently, in fact, the dating of the Dridu settlement was strictly typological, with reference to the period between the second half of the 10th century and the first half of the 11th century.

In this context, the dating of Dinogetia is important, as this Dobrogean fortress also became the key to chronological positioning for the sites in the Bărăgan Plain and others. Basically, at the basis of the dating of this citadel stood the Byzantine coins discovered in closed complexes, as well as the correlation of the numismatic evidence with the archaeological inventory¹⁵. The upper limit was established by coins and specific topostratigraphic situations. For example, cottage nr. 38 (of a blacksmith) has been crossed by two cottages. One belonging to a level of burning with pottery in situ from the first half of the 11th century, while its oven was cut by grave nr. 26. On the floor of cottage nr. 40, there was a deposit of 100 coins from Michael IV the Paphlagonian (1034–1041). The dating to the 10th and 11th centuries was also confirmed by the Russian, Slavic and Byzantine ceramics found in the settlement, as well as the nomadic pottery of the Pechenegs. The lower limit was also specified by the association of ceramics with key pieces, such as coins, metal objects, Byzantine ceramics and amphorae¹⁶. The presence of Saltovo-Mayaki pottery at Dinogetia is a real question because, theoretically at least, it could be dated to the the second half of 8th to first half of 10th centuries. This is an aspect which contradicts the affirmation of the authors regarding the inexistence of a clearly precised level from the 9th–10th centuries. The authors' explanation about a late presence of this ceramic type would suppose an evolved over 200 years. Two hundred years is a long time for the Early Middle Ages dynamics. I rather think that Saltovo-Maiaky pottery can be a proof to a level data from the 9th–10th centuries, destroyed by the subsequent occupation (and consequently difficult to study). The aforementioned centuries could be the lower limit of the Dinogetia site.

Following the inventorying and classification of the ceramic material discovered in settlements of the south of Romania, we found that the differences of fabrics are very small (although the entire typology is based upon fabrics), which implies that we cannot talk about a long evolution over time¹⁷. We could bet on the importance of some future studies which would make comparisons with the pottery of neighboring archaeological areas, with reference to the Khazar Saltovo-Mayaki culture and the one of the First Bulgarian Empire. It is worth remembering that in dating

¹² Comşa 1963, 119

¹³ Zaharia 1967, 97

¹⁴ Zaharia 1967, 102

¹⁵ Ştefan *et al.* 1967, 196–227

¹⁶ Ştefan *et al.* 1967, 196

¹⁷ Corbu 2006, 123–164

the archaeological sites from the Romanian Plain and Dobrogea, analogies from both cultural environments were used. They illustrate the atmosphere of the Khazar Empire and that of the Byzantine Empire, two neighbors at the Black Sea with peaceful relations between them¹⁸.

Nevertheless, the question arises as to the real utility of such an approach, and the response can only be a positive one if we take into account the geographical factor. However, it is negative from the current state of research. Let's to explain me! In the geographical sense, the Bărăgan Plain is crossed by two routes towards the north of the Black Sea. The first one is on land, because the Eurasian Steppe corridor closes here, and the second one is on water. The Bărăgan is bordered for almost 200 km by the Danube, which flows into the Black Sea, a "Byzantine sea" at that time. In the 9th century, the north of the Black Sea became vulnerable in the area of the Dnieper River, as two notable events occurred. The Russians conquered Kiev from the Khazars in 862, which allowed them to descend to the Black Sea and attack Constantinople from there. The Pechenegs, after pushing the Magyars towards Pannonia in 896, occupied the area between the Dnieper and Dniester (Atelkuz), depriving the Khazars of defense on the western flank. Therefore, when the Saltovo-Mayaki culture was fading in the north of the Black Sea, the Dridu culture was flourishing in Bărăgan. The Bărăgan Plain was also bordering the Byzantine Empire, on whose territory, the First Bulgarian Kingdom later developed, in the northeast of Moesia. In the past, the Danube was a difficult frontier to cross, as its major riverbed was kept intact. The Danube has two beds, one is major riverbed, the second is the minor riverbed. The major riverbed consist in the famous marshes to the north of the river, extending over a width of 4–12 km from the waterline¹⁹. This proves that, after settling in the south of the Danube, the Bulgars broke their connection with the legendary Onglos, a territory situated north of the river. The Onglos is no longer mentioned, although the documentary sources referring to the Bulgarians are more and more numerous.

In relation to pottery, the afore mentioned comparative studies are risky, because the three archaeological cultures have been studied through inventory lots from different site categories. The Dridu culture distinguishes itself through a rural aspect, proven by a swarm of settlements. The Saltovo-Mayaki culture was researched on discoveries from two Khazar fortresses, Savgar and Sarkel²⁰. The culture of the First Bulgarian Kingdom was set out on investigations from two fortresses, metropolis Preslav and Pliska. Our opinion is that the cultural parallels are a result of the good Byzantine-Khazar relations of the 9th century, which allowed merchants to travel safely over large territories. The fact that everything is due to the diligent merchants or craftsmen is proven by the change of the cultural facies from the second half of the 10th century, when the Byzantines were

¹⁸ The First Bulgarian Empire picked up a great part of the Byzantine material and spiritual culture, as proven first and foremost by the results of archaeological research in the two capitals of the state.

¹⁹ Corbu 2013 a. 85–96; Corbu 2013b, 16–25.

²⁰ The Saltovo-Mayaki culture specific to the Khazar Empire was already mentioned in 1900, thus studied long before the Slavic one. The pottery of this culture is characterized by the association of sandy ceramics with grey ceramics. The site of Saltovo (a fortified city) was identified as the old Khazar city Savgar, located on the north-western border of the Empire. The inhumation necropolises around the city were mostly studied, over 700 graves, in which several populations, Alans, Turks and Protobulgarians, were identified anthropologically. The inventory of the necropolis reflected commercial relations with the Lower Danube, Central Volga, Crimea, Northern Caucasus, China and India. Saltovo was surrounded by four Slavic tribes which paid tribute to the Khazars. It was dated to the 9th century based on 200 Arab coins. To the latter, some Byzantine coins from the 8th century are added (Kryganov 2001, 2, 347–357). The coins found in tombs were pierced. However, the specific archaeological environment is better known from the excavations at Sarkel, the first metropolis of the Khazar Empire (the present-day village of Tsymlyanskaya). Two cultural layers with multiple levels were discovered, which allowed the differentiation of the Saltovo-Mayaki ceramics, on one hand, from the Slavonic, Russian and nomadic ones, ceramics for commercial use, notched ceramics or ceramics belonging to Alan people, on the other. In other words, six ceramic types which at one point mark the evolution of the city from 800 to the 12th century. The research was completed by the excavations from the past 50 years. The research shown the cultural facies of the Early Middle Ages is much more complex than we imagine, and consequently the chronology should operate within shorter intervals.

no longer friends with the Khazars that were strategically reinforced on the Volga. The Pechenegs and the Russians were the new armed neighbours of Byzantines from the north of the Black Sea.

Another conclusion is that referring only to certain pieces without regard for the socio-political context of the time can be risky. Analogies with the Saltovo-Mayaki culture would only be valid for the 9th century, and less for the 10th century when the Russians prevail in the area. I will give the example of the grey ceramics from Bassarabia, dating from the 10th century, but which appears in the Romanian Plain in contexts of

9th–10th centuries. Moreover, the percentage in which this ceramic type appears in Bassarabia differs from one site to the other²¹. It should be noted that at Sarkel, this pottery type only exists in a small percent of 5%, which should give us some thought, since Sarkel developed in the second half of the 9th century because the citadel was barely being built during the Byzantine emperor Teophylus' time (829–842). Therefore, the high percentage of grey ceramics indicates earlier settlements, as the regretted Maria Comsa also maintained.

(II) From the above, it appears that although archaeologists made sustained efforts to elaborate correct dating, there was nevertheless no specific interest to study archaeological chronology as a science in and of itself, that is, based upon principles and laws. It has not been noticed that archaeologists only control a small part of the vast domain of chronology; they hang the material culture of history and the level of civilization at a specific point in time in an already-sketched chronological tree. For this reason, I think it would be useful to extend the absolute chronology database by dating a greater number of astronomical phenomena mentioned in written sources²².

Thus, up until the end of the 20th century, over 370 eclipses were recorded that had been mentioned only in medieval sources, of which only a few were dated²³. Apart from the lunar eclipses, the list of chronology specialists also contains solar eclipses, occultations, the position of planets in relation to the sun at a specific moment, mentioned in Egyptian horoscopes, etc. Let us simply

²¹ In the southern sites, it reaches an enormous percentage of 15–20%, while at Hansca it does not exceed 0,22% (Musteață 2005,75). Equally high proportions (20%) can also be found at Ștefan cel Mare-Feteasca, in the Călărași county (Corbu 1997, 265). We find a high percentage of 15% in cottage nr. 4 from Vlădeni "Popina Blagodeasca", dated archaeomagnetically to the first half of the 9th century. An even greater percentage, 20%, characterizes the material from a domestic oven researched at the same site. Although this proportion can differ from one dwelling to another, there are wide space equivalences throughout the whole settlement. In contrast, at Capidava, although there is a level from the 9th–10th centuries, grey pottery appears only in a 3% proportion (Cursaru-Herlea 2016, 262–263).

²² The measurement of time has been a concern of scholars and philosophers of all historical epochs. The historical chronology used today is a science that only appeared in the 16th century. Thus, it has an advance of three hundred years compared to archaeology, during which time a chronological outline was created, a type of frame. Archaeological discoveries have filled this frame, like the pieces of a puzzle. We must mention however that both the founders of this science, as well as those of today, are not historians. It is true that apart from Paulus Crusius, a history and mathematics professor at Iena, founders Joseph Scaliger and Dionisios Petavius, as well as Isaac Newton, were passionate about history and attempted to link chronology to the history known by them up to that point (history which, however, does not involve archaeology). As the specialized sciences, the measurement of time has become the domain of mathematicians, astronomers, physicists and celestial mechanics specialists. Their passion for chronology is not given by history, but by the research of celestial bodies. Philologist and astronomer, Scaliger studied ancient calendars, Isaac Newton studied the position of colures (the two circles of the celestial sphere) when he bumped into the chronology issue. Robert Newton investigated the elongation of the moon and consequently had to establish the chronology of lunar eclipses throughout history. It should also be noted that not all scientists agree with the classical chronology. The research from the last century seems to confirm Isaac Newton and Nikolai Morozov who, independently from one another, maintained that Antiquity is shorter. Thus, from an archaeological point of view, the possibility arises that some cultures would have been contemporary and not successive. This hypothesis is also sustained by some of our contemporaries. For example the chronology of ancient Egypt published in 1991 by a British group led by Peter James shows that it is shorter by 250 years (Diacu 2008, 96). We will not go into this topic, but we must observe that not even absolute chronology is so sure after all. In the present study, I have only referred to the traditionally accepted chronology, as it was outlined by Joseph Scalinger and later completed, and upon which the current archaeological chronology was based.

²³ Diacu 2008, 96

name them astronomical phenomena. Thus, they obtain from the historical documents a series of astronomical phenomena that they compare to another series obtained through specialized measurements on celestial maps. The exact identification of the phenomenon is, however, dependent on the accuracy of the textual description, on the translation, on the experience and culture of the scientist who finally establishes the dating of, say, an eclipse. This can be named classical absolute chronology and it is the framework in which historians have set their references. From this category, the early medieval archaeology from Bărağan, and not only, benefits from two results, around which an entire history has been built. Astronomers dated to 968 the solar eclipse mentioned by Leon Diaconul in his work²⁴. Historians linked to this year the Byzantine return to the Lower Danube, the Byzantine-Russian war which preceded it, as well as the entire history related to the emperor Ioan Tzimisches (969–976). Emperor Constantine Porphyrogenet (912–959) mentions in his work that he is in year 6640 from the Creation²⁵. According to the Christian chronology established by Dionysius Exiguus, the scholar emperor wrote his work in 952 AD. Around this date the presence of the Pechenegs in the Lower Danube was also specified. Therefore, exploiting the astronomical dating line by elaborating some interdisciplinary studies would offer us new support points, much more stable than relative dating.

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²⁴ Diacu 2008, 10.

²⁵ Constantin Porfirogenetul 1971, 63.

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