

Light for Life and Death in Early Byzantine Empire¹

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What could be more ordinary and habitual for a person of the Greeco-Roman world than light, dispersing darkness? Ancient people constantly had to use various lighting equipment, to think how to keep this poor light. The centuries were passing by and different changes in this field were taking place. They were summing up bringing a great revolution, sometimes inconspicuously for contemporaries. Is it possible to notice this process now, to understand the causes, the meaning and the gist of the change which occurred when one epoch was replacing the other - this being what is referred to as the Late antiquity and the early medieval period, which is unfairly known as the "dark ages"?

Usually we see this change as a simple scheme: the Byzantine Empire became a successor of the Greek and Roman civilisation and of traditional lighting equipment i.e. clay lamps. Later on lampadas and candles appeared, followed by a silent emptiness of the 7th-9th centuries. After this period problems of lighting seem to disappear. People solved this problem with the help of different lampadas and torches. That's why historians used to see only the regression here, but not the progression. It is obvious that we have to use a general as well as a detailed view to all the events of this period to try to produce a new opinion, concerning the problem of lighting equipment. Only such a view allows us to notice changes that were mentioned in some short phrases of Byzantine writers and survived in badly preserved physical remains of the Romaine culture.

At the time of the birth of the Eastern Roman Empire a new stage in production of well-known classical lamps of the so-called Roman type began. They were closed oil lamps with an egg-shaped or pear-shaped body and with a little hole for pouring oil into the vessel. In the earlier period, i.e. the 3rd century A.D., the Italian influence to production of clay lamps, usually covered with bad red or brown slip, began to diminish and a lot of new local varieties with some common features appeared.

First of all, the quality of clay, firing and the general proportion of the lamps became cruder. Decorative forms were getting coarser and disproportionality of the whole lamp became the main tendency; in general all the artefacts from this period exhibit a cold stylisation. However, new, easier methods of decoration and new rough elements were born at the same time. Sometimes craftsmen improved unclear details of imprint with the help of retouching, which was made with sharp shaft. A handle was very often made only as a rudimentary, flat (plane) and not perforated projection. All these lamps relied on mass production and consumption by all the population. Some

fine objects were also produced at this time, however they do change the general situation and are not considered in this paper. Therefore most of the scholars studying this subject have a common opinion about difficulties in classification of Late Antique lamps, their dating and localisation of workshops (Bernhard 1955:181; Szentleky 1969; Gualandi Genito 1977:227-228; Chrzanovski & Zhuravlev 1998: 80).

In the 6th century A.D. it is possible to distinguish following centres of Late Byzantine lamp production: Greece (Attic, Corinth), Egypt, Mauritania, Syria, the north and the north-west coasts of Asia Minor and Thrace. The main part of these lamp types existed simultaneously, sometimes during two centuries. According to the numerous finds from Chersonesos-Cherson in Taurica it is possible to note, that by the beginning of the 6th century A.D. the so called "rubchatye" lamps ornamented with sun-rays and produced in workshops of the north Pontic cities, the jug-shaped lamps, that are found with Late Attic, Corinthian, Syrian, Palestinian, Egyptian artefacts and with small crude egg-shaped ones had predominated (Sorochan 1982: 43-45; Kadeev & Sorochan 1985: 96-99, fig.1b, 3-4; Zalesskaja 1988:233-237; Zalesskaja 1987: 308-322; Hayes 1992, Pl. 20, 34-43; Chrzanovski & Zhuravlev 1998, N 59, 63, 67, 68, 70, 75 - 80, 82-84, 89-91; Son & Sorochan 1988: 127-131, fig. 5, 5-6; 6). By the end of the century fine red slip lamps, coming mainly from Alexandria and Carthage, and Coptic lamps with discuses made in a shape of a frog took important place among other imported lamps and they competed well with artefacts from Late Roman workshops of Asia Minor and Attic (Kadeev & Sorochan 1989: 61, 64-65, 69-71, 73-74, fig. 29, 1-2, 5; 30; 32, 1-2; 33, 1, 5; 36). In the 5th - 6th centuries so called Thracian ("Byzantine") lamps with figured handles in the shapes of a human head, a triangle, an oval or a cross, and North African ("Mediterranean") ones, reflecting the obvious influence of Christianity in their motifs, appeared in the North Pontic Area (Sorochan & Schevchenko 1983: 97-100, fig. 5-6; Zalesskaja 1997: 39; Hayes 1992: 86-88, 436, type 11; Chrzanovski & Zhuravlev 1998: 155-174, N 93-105, 108-110).

Clay lamps were used in every house, workshop and shop. They were hanging in front of them, in porticoes, standing in niche inside the walls or on the ground, near entrances; they were put into vaulted mounts (at some cemeteries a third of a quarter of tombs contained them) (Sorochan 1998: 113 -114, 189; Zubar & Sorochan 1984: 149). It is possible to say, that the light of lamps served every living or dead soul. Ammianus Marcelinus wrote that ancient Antioch was lighted during the night not worse than during the day (*Amm. Marc., XIV.1.9*). Byzantine chronicles and other historical works of the 6th-7th centuries A.D. were

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still mentioning lamps (“τὸ λαμπρόν” or simply “φῶς πύρ”) (Appendix ad Palladii Helenopolitani 1858, col. 181C; Chronicon Paschale... 1832: 725, 17; Leontios Cyprorum ...1864, col. 1709 B) as well as hanging lampadas (kandela) (Ioannis Malalae Chronographia... 1831: 267, 6; 285; 15, p. 468; 546, 17; Beati Ioannis Eucratae... 1976, col. 3056 C; Sophronii Patrarchae Hierosolomitani... 1864, col. 3429 D; Leontios Cyprorum ...1864, col. 1708 D). At that time workshops continued to produce not only clay, but also bronze, sometimes figured lamps, candelabra, lampodoforae, necessary for lighting of large premises, cathedrals, baptisteries, churches, chapels and mausoleums (Bank 1966: 5, Pl. 9; P. 13, Pl. 18-21b, 22, P. 611).

Lamps (λύχνος, λυχνία, λαμπάς, λαμπτήρ) did not disappear from daily life, nor from craft and trade during the next several centuries. For example, they were often mentioned in different variants by Georgiy Monach and by Amartol's Continuer (Georg. Mon. Chron: 279, 292, 353, 614; Istrin 1922: 38, 20). According to Stefan Savvait, it was a burning lamp that monk Sergiy was holding in the cave-church in 796/797 (Stefan Savvait 1907, sec. 44, p. 35, 40). Some clay lamps covered with glaze were found during the excavations of the Large Emperor Palace in the layer of the stage II (Late Isavrian period) that contained coins from Iustinian II (685-695, 705-711) to Leo V (813-820) (Stevenson 1947: 38, pl. 19, 38). They were produced later as well, in the time of Paleolog (Talbot Rice 1958: 120, fig. 29, b). Clay lamps (λυχνά) were mentioned in the letters of Late Byzantine correspondents (Smetanin 1987: 90). Primitive, but glazed open clay lamps with flat handle at the border for wick were found among more numerous clay candlesticks at the excavations of some mediaeval sites of Crimea in the 14th -17th century layers (Aibabina, Bocharov 1998: 195-208). As one of the most necessary things in daily life of ancient people they were never forgotten and remained very important part of the civilisation of Byzantine, the Migration Period and medieval Europe.

However we should note that from the 6th -7th centuries A.D. such archaeological and narrative evidence was becoming rather rare. The most catalogues and publications of lamps end with the ones of this period. The finds of lamps in close contexts of this time, very numerous in previous periods, are becoming also very rare and uninteresting (Romanchuk 1973: 246-250; Romanchuk 1975: 3-14; Golofast 1994 (1995): 217, fig.3, 4). Pear-shaped clay lamps with a broad channel from a discus to a longed nozzle are the last types of lamps and they had finished the evolution of the lighting equipment of this type by the middle of the 7th century.

At the same time the number of glass lamps (λαμπάδες) and “wine-glass vessels”, found in excavations, had increased. As the latter ones had little round handles on borders, we might suppose that they were not used only for drinking (Isings 1957: 139). Bronze lustrons (λαμπαδοφορας) of the 5th century with numerous

nozzles, ending with horizontal rings were obviously intended for setting of lampadas, but not lamps of Roman type (Lazarev & Bank 1975:15). The earliest chandelier used for holding lampadas and lampadas themselves date to the end of the 4th - the beginning of the 5th century A.D. (Mescheryakov 1978: 132). In the same period clay lamps had finished playing their important role in rituals and had been replaced by another type of lighting equipment. (Zubar & Sorochan 1984: 153). According to Paul Silenciarius (563 A.D.) glass lamps (some of them carved) were among the finest things inside the St. Sofia Cathedral (Schapova 1998: 231). Theofilaktus Simokattus, describing funeral of the Emperor Tiberius II in 582 A.D. in Constantinopolis, remembered singing psalms by burning lampadas during all the night till dawn (Theophylakti Simocatae Historiae... 1887, I,2,4).

From the 4th century A.D. glass beakers with conic or cylindrical bodies, sometimes decorated with drops of dark blue glass, appeared in all the Greek and Roman provinces and were in use the 6th century A.D. (Sorokina 1971: 85 - 101). The finds of such vessels with oil traces on their walls and images of such hanging lampadas at a stone tomb from Rome and on a mosaic in a synagogue from Hammat Tiberias testify to their employment as lighting equipment (Harden 1936: 156). Since the very beginning their popularity was as great as that of oil lamps. People poured water into them, then oil and then put a wick inside. In Chersonesos, the earliest import of glass lamps dates to the second half - the end of the 4th century A.D. when clay lamps were still widely used (Kadeev & Sorochan 1989: 72).

From the 5th to the 8th century a new type of lampadas with hemispherical or cylindrical broad body, convex border and narrow leg which was fixed into a lampadoforus predominated among lighting equipment (Hayes 1992: 400, fig. 150, 37, 38; Foy 1995: 213, fig. 160, 133; Sternini 1995: 260). Remains of such lampadoforus were found in Chersonesos in a context of the third quarter of the 5th century A.D. It had diameter of 24, 5cm and height of 12.5cm. There were 7 holes with diameter of 2.5cm for the placing of lamps and between them in its horizontal border, three oval holes in the equal distances, for hanging (Golofast 1998: 105-106, fig. 8).

L. A. Golofast who was collecting different materials concerning finds of Late Byzantine lamps in Chersonesos distinguishes several types and variants among them with analogies from other regions of Pontic and Mediterranean areas in the 4th-7th centuries. There are lamps with convex spherical base; lamps with convex conical base decorated with drops or buds usually from bright dark blue glass; lamps with three small loop-shaped round or oval handles for hanging on a bracket or a cross (Golofast 1998: 94-106). Such lighting equipment was probably mentioned by the Syrian chronicler Ieshu Stulit who wrote that the new egemon of Edessa, arriving in the town at the turn of 496/497 AD, ordered craftsmen to hang crosses with 5 burning “phanoi” over their shops on the eve of every

Sunday (Joshua the Stylite. 1882, ch. 29).

Since the end of the 4th century people began to use so-called wine-glass vessels (vessels on leg). They were multipurpose vessels, suitable both for drinking in the daily life and for cult purposes in churches. Some articles were obviously used as lamps, as they had small loop-shaped handles for hanging and are often found at the excavations of public buildings, where they could not be used as table ware (Isings 1957: 139-140; Hayes 1975: 86; Foy 1995: 205). In the 6th - beginning of the 7th centuries A.D. these vessels were a dominant type of all the glass vessels in almost all Byzantine cities (Philippe 1970: 72; Golofast 1995: 98; Golofast 1997: 314).

There are some indications allowing us to suppose that from the 9th century A.D. the Church began to persecute the use ritual objects made of glass (Schapova 1998: 53). This must be the reason for the lesser amounts of such vessels, including glass lamps. In spite of this, similar objects continued to be used as lighting equipment as was written by Constantinople Patriarch Fotius (858-867, 877-886) mentioning "evening time, ...when lamps were already burning" in one of his letters (Litavrin 1974:12). As it is told in "Miracles of St. Eugenius from Trapezund" "yelions" (as people used to name such lamps) were widely produced in the 9th-10th centuries and imported by workshops of Fasiana in Armenia (Rosenquist 1994: 52-59).

The empire statute book - Basilici and "Book of ceremonies of Byzantine court" mention candelabrae, but we cannot affirm for sure that they were used only for lamps. (Basilicorum libri LX, XV.4.6; XLIV.13.3; 15.19.1; 47, p. 724, 4). Some of bronze hanging candlesticks found in Chersonesos were considered by the excavator Kostiyshko-Valjuzhinich to be holders for lamps with a hole in the centre because candelabrae had sharp pintle (Kostjushko-Valjuzhinich 1905: 80, fig. 37a-b), although lamps of such type were produced not later than the very beginning of the Hellenistic period (Cf. Bovon 1966:15-17, N 1; Gualandi Genito 1977: 31-32, N 6-8, 21-22), were not used by Romans and are not obviously found in medieval cities. In this case pintle was necessary for holding thick wax candle.

Another reduction in the volume of lamp production took place after the 9th-10th centuries A.D.; the shapes underwent a radical change, and lamps became rough, simple, and open in form (sometimes mullet-circled (Yakobson 1959: 314-315, fig. 169; Belov 1959: 35, fig. 19; Chrzanovski & Zhuravlev 1998: 177)). The change could be explained by the growing predominance of other types of lighting equipment. If that was not so, we would have to state that from the 7th century Romans used only light of torches and hearths in their houses and churches. Of course torches helped to solve the problem of lighting and there always was a constant demand for them. As it is possible to understand from the story about the Ave Pimene the Great in the 5th century A.D., even monks were

making torches for sale and invested this revenue in buying threads and other necessary things in order not to stop their production of this product (Dostopamyatnye predaniya 1821: 318-319). The "Book of Eparchus" - orders for Constantinople trade and craft corporations reflecting situation of the 9th century - notes that a part of ergasterion income was intended for acquiring torches (των δαδών) (Eparchus, XVIII, 1). In spite of this there should be something simple and common that could be bought and used by all the population and fill up the emptiness that increased after the disappearance of lamps of Roman type. Besides lampadas whose number also diminished by the 8th century, only candles were able to play such a role and since that time they began constantly to predominate among other lighting equipment.

The Byzantine Empire did not find anything new that concerned lighting. For a long time people were acquainted with candles, which caused a great, but not rapid change. From the 4th century A.D. many types of sources contained numerous mentions of candles (cereus, cerula, κηρός, κηρίολος, κηρίνος) (S. Athanasius Alexandrinus 1884, col. 229 C; Nili Ancyrae Opera omnia 1864, II, 205, col. 309 A; Socratis Scholastici...1864, col. 689 B; Sozomeni Historia ecclesiastica 1864, col. 1537 A; Ioanni Monachi opuscula 1976, col. 309 A; Ioannis Malalae Chronographia... 1831, p. 467, 16; Chronicon Paschale... 1832: 530, 7; 605, 3; Istrin 1920: 527, 5; 57, sec. 9, p. 62, 9; Eparchus, XI, 4, 6; p. 65, 12; 125, 25) made from wax, which was signified by the same term (Istrin 1920: 329, 18; Eparchus, XI, 3). However, Georgii Amartol used the other, much rarer term ("φάρλιον") (Istrin 1920: 538, 14).

Even in the time of Ioannis Chrisostom, when lamps of Roman type were among the most popular lighting equipment, candles were widely used in daily life; they were used for lighting the houses and for funeral processions (Ioannis Chrysostomi ... 1862, col. 560). We can see candlesticks on frescoes in vaulted burials dating to the 4th century found in the West Pontic Area - Osenovo, Plovdiv, Silistria, Pech (Velkov 1959: 146-147; Dimitrov 1961: 19-21; Milcev & Georgiev 1981: 9-12). The author of the Life of Pahomii remembered that numerous candles were among the most necessary things on archbishop's travels in Phivaida (Troitskiy, 1907: 113-114). According to Socrates Scholastics candles were used during prayer, they were lit on Saturdays and also during religious singing that were held by Christians at night in the streets (Socrates Scholastics, V.22; VI, 8).

The greatest demand for wax candles was in the time of sacral holidays, during festive events, funeral processions and fairs where many people gathered. For example, in 459 when bishop Martirius and stratilatus Ardavurius were preparing the body of Simeon Stilit to be buried, "it was not possible to see a mountain because of the crowd, candles and lampadas...when all the people of the town came to meet the procession with candles and singing" (μεθ κερών και υμνων) (Antonin, sec. 23, 28; p.83-85).

Candles were bought for everyday religious services, liturgies, sometimes even by clergymen themselves as it was done by a deacon of the Church of St. Sofia (Diegesis ton thymaton toy agiou ... Artemiou 1909: 25, mir. 21). These candles were different - rather common cheap ones and more expensive candles with special covering (Diegesis ton thymaton toy agiou ... Artemiou. 1909: 26-28). This early description can be compared with Late Byzantine evidence about simple candles and candles decorated with Christian symbols and designs, made with "gold" (Codinus Curopalata 1864, col. 64). It also should be noted that candles were sold by their weight which proves the mass character of such goods (Eparchus, XI, 9; Sorochan 1998:109).

As Joann Malala and later Byzantine authors informed us, during the reign of Theodosios, in the forties of the 5th century A.D., Constantinopolis eparchus Kir Sophist (Philosopher) who "used to take care of everything" "invented" (επενόησε) a new way of workshop lighting which had been unknown to Romans before (Joannis Malalae Chronographia... 1831: 361, 5 - 362, 3; Istrin (1913) 1914, XIV.4.15 - 25, p. 12; 66, t. 1, p. 598, 22). This innovation, for which, along other important inventions he was praised, was compared to the renovation (ἀνανεώσαντα) of all the city, which had been damaged after an earthquake and to the construction of the new city wall. This means, that a "lighting reform" was a really serious innovation and the new lighting equipment replaced former oil lamps. We can suppose that the innovation was either hanging glass lampadas or wax candles that were constantly used from the 4th century A.D.

New processes and changes also took place in Late Roman Chersonesos - early Byzantine Cherson, one of the greatest cities of Taurica. Finds of fragments of lighting equipment are treated by archaeologists as one of the types of lamps. As these finds come from the same contexts as Roman lamps, they are considered as their counterparts and are published usually in the same chapters (Kadeev & Sorochan 1989: 96, fig. 4).

However, some peculiarities of their construction leave no doubt that these are new types of the earlier clay lamp-candle-holders, being used in Chersonesos-Cherson at the same time as Late Roman traditional clay lamps and that they were produced probably in same workshops (fig. 1, 1-3). They were wheel-thrown open lamps with the height of 4,5-6cm and the diameter of 9-12cm with a hollow shaft in the centre of the bottom, 6-7cm high and with the diameter of 4,5-5cm. A candle of the same or slightly smaller diameter was put into the centre; wax was accumulated in the bottom. The candle remains were easily extracted by heating the candleholder. As a result of that wax was poured out through the hole made near the end of the tube and then through the channel in the border of a candleholder. Wax, as an important and rather expensive material was obviously reused.

Such candle holders were known in Late Roman Moesia,

Capidava and Tomae as well as in early Russian settlements of the 11-13th centuries A.D. (Kadeev & Sorochan 1989: 96; Petasuyk 1976: 175-178, fig. 1). K.Kostjushko-Valjuzhinich treated them as "lamps of Byzantine time" (Kostjushko-Valjuzhinich 1898: 6; 1902: 85; 1905: 71; 1906: 43-44; 1907:115). Their finds in a tomb with coins of Bosporan King Sauromates II (Kostjushko-Valjuzhinich 1907: 96, N 1960), in a vaulted mount among Chersonesos coins of 211-217 A.D. and Roman coins of Gordianus III (238-244) (Kostjushko-Valjuzhinich & Skubetov 1911: 55, N 2286), in a cistern containing 4th-century artefacts (Belov, Strzheletskiy, Yakobson 1953: 184-197, fig. 38d) let us suppose that these candle-holders had existed as a special type of lighting equipment from end of the 3rd century A.D. and continued in the following centuries.

The diminishing of lamp finds in the 6th-7th centuries and degradation of their types can be explained only by the increased use of candles in lighting. Burning lamp as a symbol of a soul and a symbol of light, and to prevent evil, was replaced by a burning candle (Cf. Sebeos 1939: 115, chapter 45; Zubar & Sorochan 1984: 148-154) and even in funeral processions people began to use polycandles. The terms "λαμπάς" used before for clay lamps, seems to have been used for candles as well (Socratis Scholastici ... 1864, col. 689 B; p. 225). One of the causes for the increase use of candles was the reduction of oil imports, caused by military events against Islamic expansion (Lopez 1959: 72). Oil has been among goods with which government tried to prevent disturbances, connected with the absence of the other most important goods (Codex Iustinianus 1895, IV.41.1; Sorochan 1995:123-124). Many events of that time - annexation of Egypt by Arabs, evacuation of Romans leaving Alexandria by last boats and the loss of the north African territories that were main exporters of oil, by the end of the 7th century A.D. - became catalysts of the process of curtailment of mass lamp production. For the production of candles oil was also needed, but in much smaller amounts than for lamps and lampadas (30-50 grams for a lamp was only enough for three or four hours of burning). Embargo on oil imports, which was controlled consecularly by Basileuses, proves that such a situation lasted for several centuries.

Evolution concerning the profession of candle-maker, very rare in the 2nd-3rd centuries, should also be noted. The vast corpus of Latin inscriptions has only one mention of cerearius (CIL, Vol.3, N 2112). Candles could appear among goods sold by a wax seller, who was known in Greek and Roman Egypt as a keromatikos (Fihman 1965:31; Fihman 1976:128). Later kyroularioses as well as kyropoluses had obviously the same function.

According to the amount of mentions in different historical sources, the profession of keromatikos had been the most widely spread in the Late Byzantine period. Letters and Latin papyri of the 6th-7th centuries speak of cereariuses in cities of Byzantine Italy, in Neapolis and Ravenna (Borodin 1991:115). The Miracles of Artemius, written in

the second third of the 7th century A.D., contain unique details concerning this craft. The story proves with certainty that *kyroularios*, “working” in a Constantinopolis’ porticus, made and sold candles of different types, quality and price. He also repaired broken candles (but not candle-ends) that were returned to him (*Diegesis ton thymaton toy agiou...* Artemiou 1909: 26-28, mir. 21; Cf. Eparchus, XI, 6). When deacon Stephanus, on his way to the St. Artemius church bought very expensive candles in a *kyroularios*’ shop, had slipped and broken the candles, he “returned the broken pieces to the workshop”.

A *kyroularios* might have had a rather good income. In the beginning of the 9th century A.D. it was sometimes possible to meet very rich people, whose wealth aroused envy of even noble Byzantians, among *kyroularioses*. The first Empire financier - the chief of the tax department Basileus Nikiphorus I Genik, who had a constant lack of money, finally found a person who could always supply him with it. This person was a *kyroularios*, having a workshop near an agora of Constantinus, who was able to pay 100 pounds (approximately 32 kg of gold) for the honour to be present at the emperor’s dinner. This sum allows us to suppose that such people were wealthy enough as compared with other craftsmen (Theoph. Chron.: 487-488). The same amount of money was gathered as a state tax (*κομέρκιον πανηγύριον*) at the annual fair in Ephesos (Theoph. Chron.: 469). According to the Byzantine *Taktikonae* of the 9th century, even the greatest Byzantine military leaders commanding the most important regions of the Empire did not earn such sums (Sorochan 1998: 405-406).

The “Book of Eparchus” mentions imposing fines of 40-50 gr. of gold besides physical punishments and goods confiscation for *kyroularioses* as a punishment for violation of work rules (Eparchus, XI, 5, 7; VI, 13; XII, 1,3,5; XIII, 3). *Kyroularioses*’ wealth is proved also by the fact that there were many householders, leasing premises, among them (Eparhus, XI, 7; p. 121-133).

Although mediaeval west European craftsmen made tallow candles (Registr remesel, 1958: 177-178, kol. LXIV), Byzantine *kyroularioses* were only able to sell wax (*keron e anergaston e eirgasmenon*) and wax candles, buy bee wax and pure oil of necessary amounts for these purposes (Eparchus, XI, 1, 3-5). There is no evidence that they produced special “lighting oil” and sold it, as some historians sometimes suppose (Eparchus, 208). Lamps and lampadas were usually filled with normal oil that was sold by people producing it and by the sellers of groceries (Eparchus, XIII, 1). Such oil did not require any special processing. The Book of Eparhus forbade grocers to sell wax (*Vizantiyskaya kniga Eparha* 1962, XI, 8), but *kyroularioses* (at least Constantinopolis ones) were also not allowed to trade in oil (Eparchus, XI, 2). However, the existence of such a prohibition itself refers to the fact that this difference was not so strict in reality and sellers tried to deal with their goods according to desires of customers.

There is a popular opinion among historians that candles were too expensive for everyday using. This contradicts the wide prevalence of the professions of a maker and a seller of candles and wax (*κηροπώλης* and *κηρουλάριος*) in Byzantine cities of the 9th and 10th centuries A.D. (Theoph. Chron. 1883: 487; Istrin 1920: 565, 11; Georg. Cedr., Vol. 2, p. 39), as well as a large amount of their workshops and special quarters of craftsmen (Istrin 1920: 540, 12; Theophanes continuatus: 377.10, 420.15, 437, 715.12, 744.19, 870.21; Sorochan 1998:15-16, 58-60). The amount of candles, produced in workshops situated near the St. Sofia cathedral, was enough to supply not only the main cathedral of the Empire, but also most of the houses of Constantinopolis citizens. And this place was not the only one trading with candles in the city.

Finally bronze hanging candlesticks from Byzantine Cherson, mentioned above, also contradict the fact that candles were used only for burning in front of icons and not for lighting even in churches (Eparchus, 208). There are some finds of candlesticks and of their needles from city estates (Ryzhov 1988: 21-22, fig. 79). In general, trade was highly developed in early Byzantine Cherson and it was well known as a great centre of wax re-export (Romanchuk 1981:322; Sorochan 1995:115-120). Basileus Konstantinus VII noted telling his son Romanus, the future emperor, that the citizens of Cherson were keeping in touch with nomads, who used to come to this city and were exchanging various goods. The main goods citizens of Cherson were offering were clothes, belts, pepper, leather etc (Const. Porph. 6. 2-11). On the other hand nomads brought wax and pelts which was exported to Romania afterwards. According to Basileus’s words, the city could not exist without such a trade, for it was the main income for lots of citizens (Const. Porph. 53. 530-532). As the term “*τὰ κήρια*” could mean not only wax itself, but also some goods made from it, for example candles, I can presume that at least part of all wax brought to the city was used for processing and that local *kyroularioses* sold candles to their neighbours, for it was profitable to sell manufactured rather than raw material. Candles might have been among the most common goods, as salt, agricultural products and other necessary things were, and became one of the main objects of local production very soon.

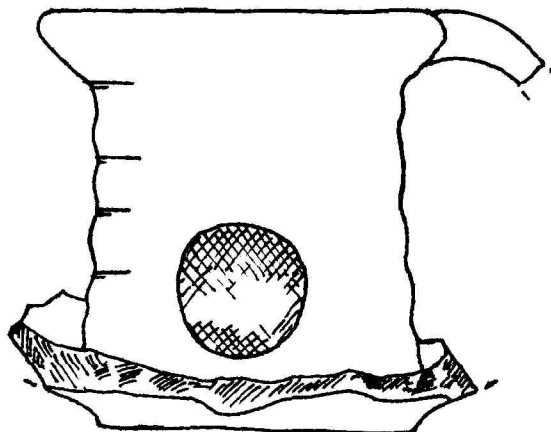
As a conclusion I should note that by the 7th century candles had replaced Roman lamps in daily life. Glass lampadas were also in use, from earlier times, but they could not compete with wax candles. The candles played important role in trade as well as their specialist sellers, *kyroupoloses* and *kyroularioses*, did. That does not mean a crisis of this craft but only the beginning of new types of production that was caused mainly by economical and profitable changes. We can name this process as a revolution in lighting equipment production and state that a new page was opened in its development.

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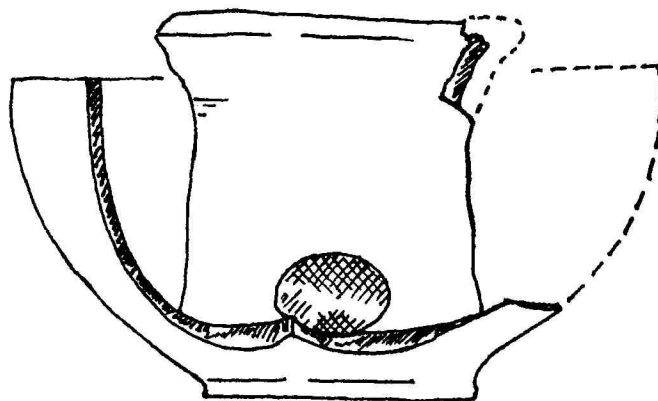
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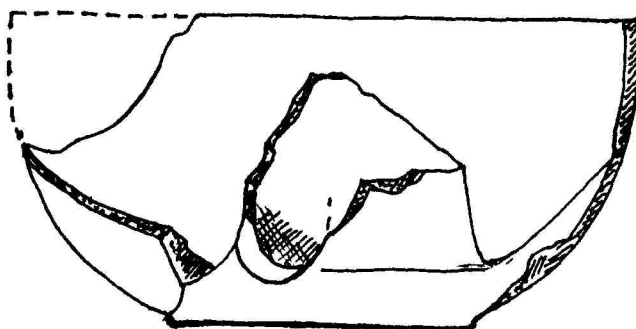
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