Gynaecium Iovense Dalmatiae – Aspalatho

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Et quia Dalmatinus erat origine, nobilius edificium prope Salonam edificari iussit in modum urbis munitissime, quasi imperiale palatium, in quo templa facta sunt ydolorum Iouis, Asclepii, Martus, sicut apparet usque in hodiernum diem. In hoc edificio Diocletianus matrem suam habitare fecit tradens ei Salonam cum tota provincia. Hoc scilicet edificium Spalaturn dictum est a pallantheo, quod antiqui spaciosum dicebant palatium.

So is the tale told by chronicler of Split Thomas the Archdeacon, in the mid-13th century.¹ In scholarly literature, the term ‘city’ was first mentioned by Ljubo Karaman, talking of the beginnings of medieval Split in Diocletian’s Palace, and then by André Grabar in his *Martyrium* (1: 232-233).² Noël Duval, in a series of studies he wrote, asks whether Diocletian’s residence should be classified as *palatium*, *villa*, *castrum*, urban settlement or some special type of architecture, considering that in comparison with genuine imperial palaces like those in Constantinople, Antioch, Philippopolis and Ravenna, it was wanting a number of ‘attributes’.³ It was not, then, a *palatium* in the true sense of the word. This was, it would appear, the view of most of the ancient writers, who when mentioning Diocletian’s residence used the term *villa* and not *palatium*. Duval says that the term *villa* suggests a building “élevée en rase campagne”, in which the architect was given freedom to create a plan with the basic residential function.⁴ After he explained why he could not consider it either *castrum* or urban agglomeration, Duval proposed the term “château”.⁵ The term was thoroughly investigated by Slobodan Čurčić, discussing late antique palatine architecture, showing convincingly that the urban character of these residences was un-

1 TOMA ARHIĐAKON 2003, 16-18.

2 KARAMAN 1940, 420.

3 DUVAL 1961; DUVAL 1961/62; DUVAL 1991.

4 DUVAL 1961, 88. The term is already mentioned in ZEILLER 1912, 20. ZAWADZKI 1987, 224, is of the opinion that the ancient writers using the concept of *villa* actually did not think so much of a specific kind of building, rather of the rural domain to which the emperor retired.

5 Excellent review of these terms see in: ČURČIĆ 1993. Full commentary and account of the references see now in: KUHOFF 2001, 716-783.

doubted (of Antioch, Nicomedia, Salona, Constantinople, Split) – although the miniature municipal quarters in them had an only slightly more than symbolic significance.⁶

Diocletian's building in Split really does not have the external look of a Roman imperial villa. It is enough to compare it with a contemporary villa; in Piazza Armerina, which is composed as a kind of baroque spatial arrangement freely disposed in the landscape, like most of the other imperial country residences, in which sea, river, forest and trees move in and out of the loosely outlined architectural complex, offering views that enchant us even today. In Split, in particular with respect to the two architectural masses in the northern part of the building, we note, I would say, its innate anti-landscape character, both the internal and the external disposition of the architectural elements, which is almost inorganically formalised. Not even in the narrow residential area, within which the halls are interconnected only via the 'crypto-portico' having no direct contacts with the surrounding landscape, we do not find any of the characteristics that in the nature of things we would expect in a residence in which, it was always considered, the emperor intended to while away his final years.

The Split edifice is really primarily an example of fortification. But here too we can be surprised. The sentry patrol corridor should be on the top of the walls and should be protected with a parapet, while here it is on the first floor, perforated with hardly defensible apertures (3 x 2 m). The building was clearly primarily motivated by the desire to impress the surroundings, with its emphatic delineation of military presence and power. The Golden and Silver Gates and the great apertures of the sentry corridor on the three sides of the walls onto the mainland must have been walled up before the Byzantine-Gothic wars of the 530s.⁷

But it would seem that we can understand its form – so very particular that it evades the usual, in some sense fossilised, terminology – only through some new reading of the original meaning and purpose of the building itself. In my opinion, this is proffered by a very simple question. The aqueduct that brought water into the palace from the source of the river Jadro was, in the design and execution of the imperial architects, undoubtedly related to the construction of his final dwelling place. Although it is a rare specimen of a Roman monument of this kind that is still being used today (reconstructed in 1878), in the literature and in research it has been almost entirely neglected, and has certainly never been interpreted in the original context. The aqueduct provided 1500 l/sec. (129.600 m³ a day), which in terms of our standards would be enough for a population of 173,000. This is shown by the fact that today's Split uses a conduit of precisely the same cross section; the cross section of

6 ČURČIĆ 1993. DUVAL 2003, 298, n. 118, comments on his contribution as a "courte synthèse qui perpétue la tradition des théories classiques sur le palais dans la ville."

7 BELAMARIĆ 1991.

the supply channel came to 0.75 by 1.60 metres. The free fall of 33 m from the source along the 9 km to the palace was employed.

It is hard to reply today to the question why Diocletian's aqueduct did not excite more express interest earlier. In Ernst Hébrard's work it is not even mentioned; in Georg Niemann's volume it merits a sentence, and in the whole series of books devoted to Diocletian's palace and Salona it is mentioned here and there with the occasional sentence, but with some detail only in Frane Bulić's book (of seven decades ago).⁸

Did Diocletian's engineers just build the aqueduct too big? To what extent was it anticipated as branching out over the whole of the region? The rural population, as a rule, had no benefit whatsoever from aqueducts. Even a modest local plan for irrigation would assume a consumption as large as for the whole of Rome. Aqueducts most often were not built for the sake of drinking water, but for "the sake of public ostentation", for luxury and primarily for baths. But the baths in the Palace were truly of very modest dimensions, particularly when compared with the *thermae* complexes in most of the other imperial residences. So much water must somewhere in the imperial palace have been celebrated in some visible manner. But all archaeological evidence is mute with respect to any fountains, *nymphaeae* or springs in it.

The capacity of Diocletian's aqueduct was several times greater than that of Salona, which fed a city with a population of about 60,000 (the number is actually calculated according to the cross-section of the aqueduct).⁹

Of course, for the Roman understanding of civil engineering undertakings it would not have been at all unusual to think so far ahead, as best witnessed by the *Cloaca Maxima*, built in the sixth century BC in a still rural Rome, and yet pro-

8 NIEMANN 1910, 112; HÉBRARD/ZEILLER 1912; BULIĆ/KARAMAN 1927, 109-114; MARASOVIĆ/MARASOVIĆ 1968, fig. 44; MARASOVIĆ 1982, 19. It was treated thoroughly for the first time in: BELAMARIĆ 1999. It is characteristic that so far it has always been written that its capacity was 1,100,000 cubic metres a day, which would be equivalent to the combined capacity of all aqueducts in Rome.

9 The throughput of the Salona aqueduct was 12,000 cubic metres in 24 hours (GERBER 1917, 140). For the essence of the problem it is not vital that by calculation one arrived at the number of citizens, which in fact could be three times as few (although the same number was arrived at via the usual calculation according to the capacity of the amphitheatre, which had 13,400 seats, and could be assumed to accommodate about 20000 spectators all told). In a letter Frank Kolb stated his opinion that Salona might have had a population more or less the same as the Ephesus of the time, for example. The aqueduct of ancient Petovio had a capacity of 40,000, and it had only 10-20,000 inhabitants. Rajko Bratož, considering the theses of this study, thinks that the "over-dimensioning" of the aqueduct could in the case of Petovio have served the needs of other facilities, like the imperial palace *extra muros*, from the 4th century, or also for textile manufacture, since the mention of *vestis Norica* in the *Expositio totius mundi et gentium*, applied actually to Petovio.

phetically designed for a metropolis of a million, still being used today – like the Split aqueduct – bearing out the known maxim that low initial costs in city planning do not necessarily lead to savings. The sheer amount of water inevitably leads to the question of what it was meant for, because it far exceeded the needs of the relatively modest bath complexes in the Palace, and even of the most luxurious fountains that might possibly have existed. The answer might be hidden in an almost neglected item of information from the *Notitia Dignitatum* OC XI 48 (ed. Seeck, 150) where there is a mention of the *Procurator gynaeceii Iouensis Dalmatiae – Aspalato*: warden of the imperial weaving shop for the production of woollen clothing for the army that worked in Split, under the title of Jupiter.

So far it has always been thought, on the rare occasions when this fact has been mentioned at all (and then only by-the-bye) that this *gynaeceum* was only after Diocletian's death 'inscribed' into the Palace, which was for the whole of the 5th century a kind of pensiopolis of dethroned emperors or pretenders to the throne. Karaman writes in a little more detail:

"The Roman Empire of the last ages before the waning of building activities paid special attention to the imperial palaces not falling into dilapidation. The imperial edict of 471 or 513 enshrined in the Codex Justinianus orders the use of the imperial palaces in the cities for the seat of the regents, and that they be protected from dilapidation (Codex Justinianus I 40 15). It is not surprising, then, that in the imperial palace in the 5th century the gynaeceum Joviense should be mentioned, a state-owned weaving shop in which women were employed, and that, probably, the Roman Emperor Julius Nepos should have resided in it (476-480)."¹⁰

So far it has been considered that the northern part of the Palace was reserved for the Imperial Guard, for stables and the like.¹¹ Of the possible physical aspect of the said

10 KARAMAN 1940, 420. Bulić too mentions the *gynaeceum*, saying that after the death of the emperor "the northern part of the palace was transformed into a workshop, in which females worked, weaving cloth for the Roman soldiers" concluding: "This is one of the rare examples in history where a building that was primarily a fort and a luxury villa of a powerful emperor, after his death, was turned partially into a refuge of deposed emperors, and partially into a state workshop, and then was abandoned, and then at last became a city and provided refuge to the population of the close large ruined metropolis of a province, to wit, Salona!" (BULIĆ/KARAMAN 1927, 180, 187 and 256). See also: WILKES 1969, 387.

11 This opinion is summed up by CAMBI 2002, 80-81: "The northern part was meant for the army, the servants and auxiliaries. It is the porticoes with the rooms that surround the central courtyard that seem characteristic of barracks of various types." By way of comparison he cites the case of *Ludus Magnus* in the immediate vicinity of the Coliseum or the gladiator barracks in Pompei. ČURČIĆ 1993, 69, sees the same function in the northern part of the Palace. For a description of the buildings in the northern part of the Palace see: MARASOVIĆ 1989, 225; MARASOVIĆ/MARASOVIĆ 1994, 96; McNALLY 1996, 12. In none of these works is the *gynaeceum* mentioned.

gynaecium there has been no discussion, and the quote from the *Notitia Dignitatum* did not move investigators to conduct archaeological digs even where they were feasible.

The *Notitia Dignitatum*, a long list of all the senior offices in the Empire, civilian and military, is certainly of a composite character. The basic text was created probably in about 408 (*in partibus Occidentis* changes were recorded up to 420), but it conceals a lot of information about the periods before the revision of the basic copy, mirroring the order that Diocletian had brought into the state, which certainly relates to the Split *gynaecium*, which alone of the 14 such complexes located in the most important cities of the empire bears the characteristic predicate *Iovense*.¹² In my opinion, it must in itself constitute a *terminus post quem non* to do with the origin of the factory of military uniforms of wool in the building in Split. From Constantine on, it is inconceivable that some state institution should be given the epithet *Iovius* – an epithet of course of a mainly votive character.¹³ Apart from Diocletian himself, the appellative *Iovius* was borne only by Galerius and Maximinus Daza (the first died in 311, before him, and the second in 313). It was also borne by Licinius, who lost all control over the European continent, including then Illyricum, by the latest at the beginning of October 316.¹⁴ It is only, then, theoretically possible that soon after Diocletian's death the palace was transformed into a military uniform factory, since it was useless as a residence to the reigning emperors. But this would have had to happen in the very short interval between Diocletian's decease (probably in 312) and the disappearance of Licinius from the horizon from which he might have affected the change of purpose of the whole building. However, the sequel of this lecture will

12 JONES 1964, 38. The *Notitia* was compiled in the 420s, and it is contemporary to the *Codex Theodosianus*, published in 428, containing a large number of provisions from the previous century that relate to the *gynaecia*.

13 SESTON 1946, 222-227. I find that CONS 1882, 356, as early as 1882, concluded that the name borne by the Split *gynaecium* shows that it was founded by Diocletian himself. This was to be literally, perhaps, and if I may say so, without perception or commentary, regurgitated by NOVAK 1948, 136, closely following the Cons line of development. For when he elsewhere returned to the matter (NOVAK 1978, 35), he repeated, as others did, that "after the death of Diocletian his palace became state property and was used for various purposes. Thus at the beginning of the 5th century, the northern part was used as a cloth weaving workshop." It is interesting that John Wild – to whose description of the ideal *gynaecium* we shall on the whole adhere – without further explanation of the statement or testing out its eventual repercussions on the Palace idea, specifically says (WILD 1967, 651): "The adjective *Iovensis* applied to the *gynaecium* in Dalmatia (the name Aspalatho at the end of the entry may have been added later in clarification) may be a direct reference to Diocletian's title *Iovius*." JONES 1964, 863, understands *Iovensis* as the adjective formed from the city-name *Iovia*.

14 The Battle of Cibala (Vinkovci) is usually dated October 8 314, but today there is a prevalent opinion that it actually happened two years later, or that it even occurred in two phases, up to that date. BARNES, 1982, 72-73; DEMANDT 1989, 69-70; POHLSANDER 1995.

show that it is almost impossible that in a relatively short time (between 10 and a maximum of 34 months) a major civil engineering operation of the transformation of the major part of the palace into a *gynaecium* could have taken place, which, we shall see, could presuppose the building of an aqueduct, the incorporation of a sewage system that was just as powerful under the main transverse and perimeter porticoed streets, the rebuilding of whole blocks in the northern part. In addition it would have to be hypothesised that in the short time from the death of Diocletian to the time when it would no longer be able to tack the predicate *Iovius* onto the Split works, it would have been possible to note the suitability of the geophysical characteristics of the Bay of Split, the many sulphurous springs around the Palace (necessary for the functioning of the *gynaecium*) and finally, recall that there was to hand, which is most important, a vast quantity of wool. For it should be pointed out at once that all of the premises for the functioning of the *gynaecii Iovensis* of the 400s (as its origin was dated, according to the date of the creation of the *Notitia Dignitatum*) were possessed by the building in the year 300.¹⁵

The greatest part of Roman industry was organised through quite small-scale production ("the back-street workshop being the norm", says John Wild, who is best acquainted with the functioning of the late-antique period *gynaecia*, exclusively through meticulous analyses of textual documents).¹⁶ An exception is in the production of cloth, concerning which assessments are made mainly from data from the *Notitia Dignitatum* and from the *Codex Theodosianus* in which *gynaecia* and *lynphiae* are mentioned, the great state establishments in which slaves produced the wool and linen garments for the armies of the later Roman Empire. Although the *gynaecia* were never mentioned in the context of Diocletian's reforms, it is generally accepted that they were created at the time of the first Tetrarchy. The concentration of the labour force, the range of specialised jobs, the degree of organisation and their connection with urban centres makes them, in the judgement of historians, the closest to the modern industrial factory. State factories (*fabricae*) were set up in the late Empire to eliminate or at least to alleviate the difficulties concerning the supply of the state and

15 We might find a certain reference for the use of the epithet *Iovensis* in the fact that Aegyptus was divided into the province of Iovia, Herculia and Arabia Nova, probably in 314/15. However, there are some difficulties in dating this division: BARNES 1982, 201-208 shows that it could not have happened before 314/15, although the titles indicate Diocletian's time (perhaps ca. 297/98). Speaking of the geography of the imperial textile establishments, DELMAIRE 1989, 446, says that nothing helps to date their origin: "si le gynécée de Split tire son nom (Ioviensis) de Dioclétien, il peut être plus ancien ou plus récent."

16 Compare his study on the *gynaecium* in Venta (WILD 1967) – a masterpiece of virtual reconstruction, since it is not even known where it really was (probably Winchester). In *Not. Dign.* only a *procurator gynaecii* (in Britannis) *Ventensis* is mentioned, and there were three cities of the same name.

the army with certain products. It was necessary to clothe the approximately half a million soldiers that Diocletian's army reforms had raised, as well as no small number of clerks. Archaeology, however, has never made any direct contribution to the understanding of their internal organisation, except in the case of the otherwise well documented *gynaecium* in Carthage, which lay in the heart of the city, on the edge of the celebrated Circular Harbour.¹⁷

The state operated, through the *comes sacrarum largitionum*, a number of weaving mills, both for woolen and linen fabrics, and dyeworks.¹⁸ It is surely not accidental that it is the *comes sacrarum largitionum* that was given the assignment of exploring the case of the theft of the purple curtain from the imperial grave in the Split Mausoleum in 356 (Amm. Marcell. XVI 8,4). This is proof that the building was in his immediate jurisdiction at that time. Woolen mills (*gynaecia*) in Italy existed at Rome, Aquileia, Milan and Canusium with Venusia; in Illyricum at Bassianae, Sirmium and Aspalathos; in Gaul in Lugdunum, Remi, Treviri, Tornacum and Augustodunum; in Africa at Carthage; and at Venta in Britain. There were nine dyeing establishments, among them one at Salona in Dalmatia. The Split *gynaecium* should have probably been in some kind of complementary relationship with the *gynaecium* moved to Salona, perhaps for security reasons, from Bassiana (Donji Petrovci, Pannonia Inferior) also noted by *Notitia Dignitatum* XI 46 (*Procurator gynaecii Bassanensis Pannoniae Secundae translati Salonis*). The last two words may be a later correction: "moved (now) at Salonae". In Salona, thus, there was a large cloth dyeworks (in Not. Dign. the *Procurator bafii Salonitani Dalmatiae* was also mentioned) and weaving mill. At Five Bridges in Salona artisan workshops were actually found, probably a dyer's workshop, and fulling mills for cloth and the dyeing of cloth. Also to be seen is the reservoir from which the water to drive the mills ran, and a building for the habitation of the workers.¹⁹ In Salona, in addition, there was then a weapons factory.²⁰ At the same time a *comes commerciorum* is mentioned; he was supposed to control the making of costly robes, precious items and jewellery.²¹ In one inscription in Salona, a *magister conquilarius* is mentioned (CIL III 2115 + 8572), clearly the head of the state workshops in which purple was extracted from shellfish, perhaps for the *gynaecium* in Aspalathos.²² Another inscription found in Salona mentions a certain Hilarus,

17 Explored in several very large campaigns of British archaeologists (1980-92): HURST 1995.

18 Concerning his duties: DELMAIRE 1989, 69, and in connection with textile studios, particularly Chapter XII (p. 443-467).

19 BULIĆ 1914; BULIĆ 1922. SUIĆ 1996, 702, thought that the Salona *baffeum* was moved "sometime in the 6th century to Diocletian's palace, where there was already a *gynaecium*, transferred from Bassiana". See also: SCHÖNAUER 2001, 228, 253, 287-289.

20 ALFÖLDY 1985, 206.

21 ŠKEGRO 2000.

22 BULIĆ 1986, 27; NOVAK 1948, 136.

who was the *purpurarius*, dyer of red garments or, perhaps, *negotiator artis purpureae*.²³

However sparse this information is, however much it is based on coincidentally found inscriptions and the relatively late directory in the *Notitia Dignitatum*, it allows us to realise the liveliness and élan of these workshops in the period of Late Antiquity. Unfortunately we possess very little information about the weaving and clothing industry of the Roman Empire, except, to some extent, for Egypt. As for the remainder of the Empire we have only parenthetical textual indications, and a few data from inscriptions. Still, Diocletian's Edict concerning Prices of 301 gives amazingly full, reliable and detailed lists of the prices of raw materials – of wool and linen yarn, a wide range of items of clothing, as well as the wages of weavers and other workers in the garment industry.²⁴

In the fourth century, the word *gynaeceum* is actually a literal synonym for *textorium* – a weaving workshop.²⁵ The compilers of the *Notitia Dignitatum* differentiate the *linyphia* – workshop of weavers with linen cloth – from those of the *gynaeceum*, who were dedicated to the weaving of woollen clothing, or sometimes wool and silk together.²⁶ In the *gynaecea* they produced uniforms for soldiers and civil servants – cloaks (*chlamydes*), shirts (*strictoriae*), *pallia* (a square item of clothing that could be used as cloak or blanket), blankets and high-quality garments for the court.²⁷ That the *Salona baffeum* and the *Split gynaeceum* were mentioned only in the *Notitia Dignitatum*, says that their production was a strictly channelled state monopoly, and that the products from them did not make their way to the general market as other goods did. The army was supplied directly, without the agency of merchants.

Although not all the technological details of the *gynaeceum*, the *fullonica* and the *baffeum* have been revealed, we can conjure up in the northern half of the Palace an image of the whole system of pools in which the fabrics were washed, softened and finished by being trampled on with bare feet in a solution of potash, fuller's earth, human and animal urine. Here then there was a very large demand for water.²⁸

Garments were rubbed with chalk, and fumigated with sulphur. It is particularly important to remember that the technology included, among other things, sulphur treatment (*sulfure sulfire*), for which there were the many springs of sulphurous water

23 *Bullettino di archeologia e storia dalmata* XXXVII, 1914, 56; NOVAK 1948, 139; REINHOLD 1970, 54.

24 JONES 1974, 356, 358-360. On the prices and sorts of purple clothing in the Edict: STEIGERWALD 1990.

25 CTh XI 1,24: *textrinis vel gynaeceis*; X 20,9 (referring to the *gynaeceum* in Carthage). WILD 1967, 650.

26 CTh X 21,1 (AD 369); X 21,3 (AD 424).

27 JONES 1964, 836; WILD 1974, 54.

28 CAGNAT 1896. See the most recent study, with relevant literature: BREADLEY 2002, 21-44.

alongside the Palace itself, which were used for the washing and bleaching of cloth right up to the first half of the 20th century, by St Francis church on the Shore.²⁹

The problem of copious rinsing was solved by the extraordinarily handled sewage system that existed only along the *cardo* and *decumanus* and the perimeter streets of the northern part of the Palace, in which the mentioned plant was located. Among other things, the extreme western part of the sewer under the *decumanus*, at the exit from the Palace, has been explored. It passed under the western gate (*Porta ferrea*), and moved in a gentle arc towards the south-west, finishing some forty metres further in a stone portal (below the kitchen of today's Hotel Central). Thence in an open channel all this water flowed into the bay of the sea, in the immediate vicinity of the grandest corner of the Palace.³⁰ The monumental cross-section of this sewage system corresponds perfectly to the cross-section of the aqueduct. We should underscore the fact that the sewage system was located only along the streets of the northern part of the Palace, while we might expect it to be primarily in the residential southern part, which also shows that it was constructed for the purpose of the production inside the *gynaeceum*.

Unfortunately, there are practically no archaeological records of the small finds from investigations of the northern part of the Split building. But, during excavations of the crossing place of the *cardo* and *decumanus* (in order to establish the original level of the street and the Peristyle) Mate Suić in 1974 did observe, "a very thick layer of fine sediment of a markedly red colour of non-organic origin", which had been deposited in the *cloaca*, and which had retained its intensity for centuries. This must prove the existence of a *fullonica*, which must have been located within the *gynaeceum*.³¹ Of course, the question of what red sediment Suić really did find still remains: it was very likely some vegetable substitute for purple.³²

The aqueduct that fed Split's *gynaeceum* was damaged and interrupted as early as the first half of the 6th century, during the twenty year war between the Goths and Justinian's generals around Salona and the Palace, and was then partially restored: the

29 The Austrian Emperor Francis I was in 1818 impressed by *Tomića stine* a little to the west of the Franciscan Monastery on the Split waterfront "from under these rocks well up strong sulphur springs, and the water smells and is coloured bluish and flows into a narrow bricked pit, which could be used very well" (Car Franjo I. u Hrvatskoj 1818., vol. I, Hannover/Čakovec 2002, 202).

30 JELIĆ/BULIĆ/RUTAR 1894, 73-74; GABRIČEVIĆ 1963; BULIĆ 1934, 1-3; KATJA MARASOVIĆ, SNJEŽANŽA PEROJEVIĆ, TAJMA RISMONDO in: BELAMARIĆ 1999, 65-76.

31 SUIĆ 1996, 702. For *fullonicae* see: FORBES 1955, 4, 91-99.

32 Dictionnaire archéol. d. techniques, II, 1964, s. v. vêtements: Les colorants végétaux d'un usage commun dans les civilisations méditerranéennes; REINHOLD 1970, 53. For more complete information about the imitation of purple and the substitutes and the chemical industry that produced them see: v. p. 53, note 1; ROSTOVITZEFF 1941, 1225-1226; WILSON 1938, 9-11; FORBES 1956, 120; STEIGERWALD 1986.

arches were knocked down, the pylons were reduced, and the space between them filled in with a wall to give shape to a road.³³ This finding, however, confirms the hypotheses already stated according to which the western and eastern *thermae* in the actual palace very early on lost their original use.³⁴

An aqueduct was really necessary only for the purpose of really large baths. All the pools in the baths functioned as street fountains on the principle of the continuous flow of water. Thus it is calculated that 17% of the total water use in Rome went to the *thermae*, and in many cities, which had only one aqueduct, this percentage could be much higher.³⁵ It is not necessary to point out that the need for water in the two relatively small bath complexes (more *balnea* than *thermae*) could be supplied locally, without the construction of an expensive aqueduct. After the decline of the weaving shops, when in the mid-6th century the aqueduct was interrupted, the main and perimeter streets might have taken on the characteristic appearance of the medieval souk, as elsewhere. Alas, archaeological research has until quite recently shown too little interest in the 'Nachleben' of the Palace, especially regarding its northern half.

Conditions differed from *gynaeceum* to *gynaeceum*. Workers were divided into two categories – those who worked under strict control inside the *gynaeceum* and those who worked in their own houses on the basis of fixed annual quotas of clothing that had to be delivered. Still, the proportion of convict workers and freemen who worked in the *gynaeceum* cannot be decided precisely. However, the very appearance of the two northern blocks in the palace at Split, in closed architectural masses that were easily controlled from the sentry walk along the first floor of the walls suggested that it was on the whole mainly a matter of convict labour. They were described as *mancipia*, slaves, and the *gynaeceum* was described as *familia*, a slave-household.³⁶ It was mainly women that worked in the *gynaeceum*, but there were men as well (*gynaeciarii*), often from the ranks of the convicts, primarily Christians, and it can be speculated that in the construction of his factory-cum-palace Diocletian had intended in his characteristically rational manner to solve the problem of the punishment of the Christians. Much more than executions, Diocletian preferred sending convicts to the mines, quarries and *gynaecea*. The women, *ingenuae*, who married them would become *gynaeciariae*. Lactantius complains that the Christian women were taken into the *gynaeceum* during the persecutions of Galerius in 305-311.³⁷ After his victory over Licinius, Constantine liberated the Christians who had been slaves of the state ex-

33 BELAMARIĆ 1999, 77-95.

34 MARASOVIĆ 1976; McNALLY/MARASOVIĆ/MARASOVIĆ 1977, 58.

35 HODGE 1992, 268.

36 CTh X 20,2; 20,7; 20,9.

37 As for the social status of workers in the *fabricae* see: CHARBONNEL 1964. All traders and artisans worked under strict state control, formed into groups according to the model of the *collegia*. Penalties were the same as those in the army.

chequer entered into the *gynaecia* and *linyphia*. One constitution of Constantine, after the defeat of Licinius (324-5) gives instructions that those who had been overcome by such a fate in Palestine be released.³⁸

The imperial *gynaecia* and *linyphia* must have been really large firms. Sozomen in the 5th century says that the wool weavers and the workers in the mint in Cyzicus, living with their wives and families, made up a good part of the total population ("supplying, according to the provisions of the earlier emperors, each year to the state treasury a certain number of military tunics or of minted coins").³⁹ *Gynaeciarii*, like other craftsmen, were associated into corporations or *collegia*, but were not able to leave their work, being *nexu sanguinis ad divinas largitiones pertinentes*, which makes the construction of the northern part of the Palace, in which they lived alongside their workshops, even more logical.⁴⁰ Their patron saint in 5th c. might have been, as I have already speculated, St Martin – patron of soldiers and weavers – to whom the little church in the sentries' walk over the Golden Gate, walled-in very early on, was dedicated.⁴¹ All this also suggests that Christianity was alive in the Palace from day one. Along with the bishop and the praetorians, the weavers were probably that industrial revolutionary guard of the time. It is not at all surprising that a martyr like St. Anastasius – a *fullo*, the co-patron of Split, should have come precisely from the milieu of the fullers, probably working in the *baffeum* in Salona. Wild says:

"Three factors seem to determine the sitting of the western gynaecia: first, the disposition of military field-forces in the frontier provinces; secondly, the location of the main administrative centres and their staff; thirdly, the economic geography of Roman sheep farming. [...] The strategic importance of the weaving-mills in the Illyrian diocese is self-evident but their economic base is less clear."⁴²

In Split, Diocletian's *gynaecium* was probably reliant upon a manufacture that already existed, one linked with the sulphurous water and perhaps on the broom, *genista acanthoclada*, from which a colouring agent for dyeing the cloth was obtained, and according to which, it is believed, Aspalathos actually obtained its name.⁴³

38 JONES 1960, 198.

39 Sozom. V 15,6; WILD 1967, 656.

40 In great detail about the relations that ruled in the *gynaecia*: NOVAK 1948, 137. See also: NOVAK 1928, 36. KARAMAN 1940 says: "Each, even the smallest trace from this dark age is worthy of being depicted. In 1905, Bulić, not hundred metres to the north east of the palace and later in 1922 at Gripi Fort dug up several Early Christian tombs made in the form of a tiled roof. Here probably the dwellers in the palace who were appointed to jobs in the *gynaecium iovense* were buried." (Sr. Bull. dalm. XXIX 1906: 1-7, T. I-II, i Vjesnik dalm. XLV 1922, 48).

41 BELAMARIĆ 1991; BELAMARIĆ 1998.

42 WILD 1974, 53-54

43 NOVAK 1915, 5; SKOK 1916; MAGNER 1973; ZAWADZKI 1987.

There was raw material in Dalmatia within reach. Immediately following the Second World War there were about one million sheep in the central hinterland of the Adriatic coast. The inhabitants of Dalmatian towns in the Roman period probably, like those in Istria, bought wool from the local tribes of the mountainous interior, and also possessed flocks of sheep themselves, looked after by their slaves.⁴⁴ The economy of the Illyrian tribes was predominantly based on herding, as shown in the information of the oldest Greek writers who all knew the Illyrians as excellent herdsman. Pseudoskymnos (379) witnessed to the richness of the livestock of the Illyrians, and Polybius (32,18) recorded that the Dalmatians took their tribute from the defeated tribes in livestock. The name of the tribe of the Delmats and their capital at the time of the Roman invasion, *Delminium*, speaks of the animal husbandry of the Illyrian tribes. *Delm* or *Dalm* in Old Illyrian means shepherd, herder, flock, and hence *Delminium* means the place of pasture, and *delmë / dalmë* still today in Albanian means sheep.⁴⁵

The saltpans on the coast and the islands and the salt mines in the interior, particularly valued because they were essential for the cattle, led to disputes among the tribes.⁴⁶ In many places bronze bells have been found,⁴⁷ and shears for cutting the wool of the sheep of the same shape that can be found in use today.⁴⁸ Wool provided the main material for the clothing of the highlanders, as shown by the many finds of weights of the spindles and looms,⁴⁹ and it was transported to and processed in many city workshops on the coast, of which we know a little only about those in Solin and Split.

Evidence of the organised weaving industry in Roman Dalmatia can be seen in the form of the weaving industry around Split, which all the way through the Middle Ages and until quite recently was different from that in the other regions. Weaving was regularly done on a horizontal loom, and it is interesting that Wild considers that in Roman times the horizontal loom is seldom to be found outside the specialised workshops, like the state-owned *gynaecea*.⁵⁰ In the Split hinterland, the male shepherds did weaving, in which Marijana Gušić guessed at the remnant of an organised and specialised weaving activity from the Roman period.⁵¹ We should not forget also that Dalmatia had a considerable and important direct effect on the Roman inventory

44 RADAUŠ RIBARIĆ 1988, 13-24; ROSTOVITZEFF 1929, 192; MATIJAŠIĆ 1998, 239-252, 356-361; ŠKEGRO 1999, 199-205, 268-269.

45 SKOK 1918, 128.

46 Strabo VII 5,11.

47 GUŠIĆ 1962; PATSCH 1909, 118.

48 GUŠIĆ 1962; PATSCH 1922, 142.

49 GUŠIĆ 1962; ČURČIĆ 1902, 57.

50 RADAUŠ RIBARIĆ 1988, 18-19; WILD 1976, spec. 172.

51 RADAUŠ RIBARIĆ 1988, 23.

of clothing, because in the imperial period the word *dalmatica* appeared for a kind of tunic with sleeves (*tunica manicata*), unlike the tunic without sleeves used hitherto.⁵²

It is well known that the commercial production of wool cloth in the Roman Empire depended on a series of interlocking processes.⁵³ The wool clip from the sheep's back was washed and dyed in the fleece. From combing of raw wool by professional *lanarii* to separate the long and short fibres, to spinning and weaving and fulling, the whole of this activity must have been regulated in Dalmatia in Diocletian's time into an integrated production process. The Split building might have been a kind of relay station with the broader Dalmatian hill country hinterland. How this functioned in given details is hard to find out. Still, archaeological records do reveal something. We have just finished doing research into one site (Lattice) a few kilometres up above Salona, which might have worked as a regional station of the Split *gynaecium*. This complex has revealed a kilometre long wall of a fold for herds of sheep, the presence of which is shown by many shears and bells of the lead sheep. A great cistern might have been used for the washing of the fleeces that had to be stripped of their grease. After shearing, washing, drying, combing, the wool was transported in heavy bales probably to the *tabernae* along the defensive walls of the 'Palace'.

No archaeologist has yet claimed – except now in Carthage – to have found a *gynaecium* in any of the places where the *Notitia* records one. This is not surprising – says Wild – for we could not tell him what to look for.⁵⁴ Considering what is said here, we can assume that in the north eastern block of the Split building a good part of the industrial process for the preparation of the cloth was performed, and that the weaving shops were located in the north west block. There are a series of unattractive archaeological traces characteristic of a *gynaecium*, which conventional archaeology, in the post-war decades in Split, certainly did not consider worthy of inspection. Records about the archaeological research in the northern part of the city hardly exist, and what we do know is extremely out of proportion with what we know about the southern and central parts of the palace.⁵⁵ It seems characteristic that a great chance to learn something more about the original functioning of the north eastern block was missed when, while the renovation of the premises of the city museum in the Papalić Palace, the ground floor was not archaeologically investigated. Thanks only to the occasional supervision of curator Helga Zglav do we know something about the (for us

52 DU CANGE, III/4 s.v. *dalmatica*; BRAUN 1907, 70; BOUCHER 1965, 432, s.v. *dalmatica*; SCHÖNAUER 2001, 285-286, 306-307, 395-396.

53 WILD 1974; FRAYN 1984, 142-161.

54 WILD 1974.

55 On the past knowledge about the appearance of the large buildings in the northern part of the Palace, see e.g.: MARASOVIĆ/MARASOVIĆ 1968, 14; MARASOVIĆ 1982, 132, 134.

expected) existence of pools lined with simple white mosaic, and about the great wells. That these two blocks were the dominating part of the whole building we can easily see in Hébrard's reconstruction of the Palace.⁵⁶ Let us compare it only with the general appearance of the contemporary palace in Piazza Armerina or in some other imperial residence of the period.

One of the possible main objections to the hypothesis that I am putting forward here is likely to relate to the smell, not at all of an aromatic nature, which is hard to imagine in the immediate vicinity of an imperial residence and that whole complex of aulic architecture of peristyles and temples. But did not the Salona *baffeum*, which certainly had some pungent smells, lie just a few dozen metres from the monumental episcopal complex and the *Porta Caesarea*, grandly restored in the 330s, or as grandly as the Golden Gate at Split? We might recall, by way of parallel, that Cosimo Medici I built the corridor that linked Palazzo Vecchio and the Uffizi with Palazzo Pitti across the Arno, most of all in order to neutralise the ghastly stinks from, for example, the leather that was soaked in a solution of horse urine right by the Ponte Vecchio for seven months long. They had to wait for the 17th century for the whole of this activity to be moved out of the centre of the city.⁵⁷ In general, this question rather reflects our own psychology, given its character by the puristic waves of hygienic urbanism, through which literally all European cities gradually cleared up their historical centres, shifting all kinds of industrial and artisan production out of their centres, doing away with the appearance of the medieval souk. But textile production in the northern part of the palace in Split might have been supportable even for our nostrils, since in the pools only sheared wool would have been treated, that is, the major part of the whole process could have gone on beyond the castle walls, most likely to the west of it, where we will also find the medieval industrial zone, based on the powerful sulphur springs. It is no accident that at the site of today's sulphur springs

56 Robert Adam was the first and to date the only person to attempt to give a complete description of the Palace according to the functions that individual parts might have had, of course, as he saw them in his research (ADAM 1764). At the end of his "A Description of the General Plan of Diocletian's Palace as restored, explaining the Manner of disposing the Apartments in the Houses of the Ancients", he devoted a short section to the buildings in the northern part, concluding: "I suppose one of these buildings (k) to have been a *Gynaecium*, or an apartment allotted by the Ancients for the matrons and young women, and the other (l) I call the *Aulicorum Aedes*, or apartments for the different attendants on a court. The Jesuit Farlatus mentions such apartment as constituting part of this Palace; as also a *Domus Uxoris*, or apartments for the Empress; which last I have already placed in the east end of the Palace, corresponding to that of the Emperor." Adam (or Falati, before him) did not arrive at this suggestion via the reference in the *Notitia Dignitatum*, which he did not know of, rather adhering closely to the nomenclature and disposition of the parts of the ancient houses and villas in Vitruvius and Pliny.

57 BOROOK 1991, 173.

in Marmontova street, a hundred metres to the west of the Palace, we can find the medieval little church of St Maurus de Judaica (the site of dyeworks), and leather workshops a little further off.

“There were enormous deficiencies in sanitation in Roman towns [...] which must have been extremely smelly, unhygienic and dangerous place to live. [...] One of the most striking things about fulleries in Ostia and Pompeii (but in Salona also, n. JB), is that they were situated not only in the centre of the town, but even next to the richest private houses and prestigious public buildings. In Pompeii, all the major fulleries were located on main traffic arteries. For the logic of city-planning, this is a surprising phenomenon. Were the smells accepted, ignored or tolerated? Perhaps, along with all the cesspits and omnipresent rivers of sewage, they were one of the costs of city-living.”⁵⁸

We know a little about the willingness of the emperors to put up with the stink from workshops.⁵⁹ It is a fact, however, that it did not prevent the sojourn of Galla Placidia, who hid temporarily in the palace with her minor son, later emperor Valentinianus III, and a bit later of Marcellinus, Glycerius and Iulius Nepos. In considering the problem of odour in Split, one piece of evidence might be the disposition of the halls in the residential quarter. The ground plan was pectinate, with access to the halls only from the ‘crypto-porticus’, obviously with ventilation corridors between them.

Henry Hurst assumes that the conditions of the premises varied from *gynaecium* to *gynaecium*, and that the whole industrial process did not have to take place under the one roof, but in dispersed units (some of which might be rented).⁶⁰ The *gynaecium Iovense* might have been special precisely in the fact that this was not a remodelled and expanded production area already in existence, the expropriation of some extant minor complexes (as is assumed to have happened in Carthage), but a green field project, an exemplarily constructed industrial unit. And for this reason, of all such establishments, it was the only one to have such a flowery dedication and name.

At the end one should also draw attention to an almost neglected reference concerning the palace, that is, the first description of it, uttered by the most authoritative mouth of all. In the *Oratio ad Sanctorum coetum* which he delivered in Antioch in 325, emperor Constantine said that the colossal pile of the palace was a “loathed dwelling” in which the emperor Diocletian shut himself up after this abdication:

“After the massacre in the persecutions, after he had condemned himself by depriving himself of power, as a man of no utility, acknowledging the damage he had done with his imprudence, he remained hidden in his really contemptible dwelling place”.⁶¹

58 BREADLEY 2002, 32, 36.

59 See f. e.: CTh XIV 6,1; 6,3-6,5. I am indebted to Rajko Bratož for turning my attention to this.

60 HURST 1995, 94.

61 *Oratio ad Sanctorum Coetum*, cap. 25. After: BAJAMONTI 1975, 367, n. 332, Frane Bulić quotes Zeiller’s letter (on a note stuck to Bajamonti ms.) in which he writes that this

This surprising statement of Constantine might be an allusion to the fact that Diocletian had to spend his last days in a building that – in spite of all the sumptuousness of its centre and the residential quarters looking onto the sea – must also have had the features of a military factory, to which the form of the *castrum* must have been in all respects much more suitable than to a charming imperial residence.

It is a question of whether Diocletian's impromptu arrival in Split put a stop to the work of the *gynaecium*, which probably had not even been started, because the building was not yet completed, and whether it was only after the emperor's death that it was brought on line. If the emperor really did build his last residence here, it would be extremely unusual, considering the rationality with which he addressed similar projects, for him to be indifferent to the further fate of this expensive building, that is, to have the function of the *gynaecium* subsequently inscribed into it, for which a proper sewage system would have to be dug, a branch of the powerful aqueduct led in. Diocletian's Palace, judging it all in all, is not susceptible to simplistic readings. I believe that this study has at the very least explained how this building might have functioned in the months immediately subsequent to the emperor's death in December 312. Perhaps we are going too far on the grounds of a single documented mention of the Split *gynaecium*. But even without it, considering the structure and infrastructure of the northern part of the palace, and the geo-physical features of the area in which it is built, we should surely arrive at the same conclusion.⁶²

After all that has been said, perhaps one might recall that in another place I recently attempted to show that the construction of the Split Palace started only in the autumn or winter of 298 (and not the assumed 293), after the end of the emperor's military campaign in Egypt in 297/298. I based this conclusion on an analysis of the dominant part of the material (columns, sphinxes and so on) of Egyptian origin. The Split Palace might well be, then, coeval with the Diocletian-*Thermae* in Rome. Adopting this revised date for the start of construction 'shortens' the time up to the date of its completion and thus certainly provides better reasons for the known discrepancies and incompleteness, both in the detail of the work and in the complex of the emperor's residence as a whole. Nevertheless it is perhaps possible to develop another hypothesis. Could the works have been speeded up and left partially unfinished precisely because nobody expected Diocletian's abdication?⁶³

"loathed dwelling" does not refer to the Palace, rather to "modest Aspalathos – modest in comparison with the other Roman metropolises".

62 We might add that up to May 1 305 not a single document testifies to Diocletian's visiting or passing through Salona or Split, even though the Emperor spent a lot of time in the Balkan or Danube provinces (285, 288, 290, 291, 293, 294, 303, 304; BARNES 1982, 49-56). The same goes for Galerius and Licinius.

63 BELAMARIĆ 2003: 173-175; for the problem of Diocletian's abdication, see: KOLB 1987, ch. 7; KUHOFF 2001, 297-326.

Regarding our own hypothesis, it remains to explain whether the construction of a *gynaeceum* is not highly at odds with the idea of an imperial retirement home. The palace with its *gynaeceum* in the northern half, with the cult centre and the emperor's mausoleum, with the residential quarter, constitutes an exceptionally well thought out plan, in a perfect equilibrium of court, cult and production programmes. The whole of the building fits perfectly in with the long series of tetrarchic public works. It is important to stress the autonomy of the *cardo* and the *decumanus* (12 metres broad) with their own *lastricatus* and their own *porticatus*, independent of the blocks that they hid. I would even say that the form of the *castrum* is more logical for a *gynaeceum* than it is for a palace.

What should be actually highlighted is the surprising pragmatism, as well as the great social focus of the Illyrian emperors, who really did want to renew the "fervent patriotism and iron duty in the evil days" (Syme). Probus in Egypt worked on an important improvement of the navigation of the Nile; temples, bridges, porticoes, palaces, all were put up by the army. In order to stop relaxation dangerous to the army, he had the hills of Gaul and Pannonia covered with vineyards, by the mattocks of the military.⁶⁴ By Monte Almo close to Sirmium where he was born the marshes were supposed to be drained. Diocletian was still more consistent in the application of the Probus' way with the defeated barbarians: he planted them over the depopulated areas of Gaul "managing it in such a way that in the provinces they looked with admiration at the erstwhile barbarians who, brought into the heart of the Empire, were tilling their fields and watching their herds". Galerius himself was a devotee of public works, and undertook an operation worth of a monarch, says Edward Gibbon, diverting the excess of water from Lake Pelso (Balaton) to the Danube, at the border with Noricum. He had the endless woods all around cleared, and gave the whole reclaimed area between the Drava and the Danube to his Panonian subjects to be cultivated, naming it Valeria after his wife.⁶⁵ All this after a successful close to the wars (296) on the Danube limes, flattering Diocletian.⁶⁶

Most of the buildings that Diocletian put up were of a utilitarian purpose, such as mints and the factories that Lactantius mentions, or border forts, roads and bridges. Dozens of extant inscriptions tell us of the dedications of new and restored temples, aqueducts, *nymphaea* and public buildings – *vetustatu conlapsum* or *longe incuria neg-*

64 SHA, Prob. 21,2-3; Eutr. IX 17,2.

65 Aur. Vict. 4,9-10.

66 The greatest of the Roman dams in the Near East was erected in 284 by Diocletian at Orontes in Syria, in Homs, which is still working (not the Homs near Leptis Magna). This reservoir that was created, Homs Lake, originally had a capacity of 90 million cubic metres (now 2,000 million, after the addition in 1938, which raised the level of the dam), mainly for irrigation purposes, and perhaps also for the use of the city. (HODGE 1992, 411, n. 59).

lectum – dilapidated from age and long neglect.⁶⁷ The new system of taxation enabled the Roman Empire to have, for the first and last time, a budget in the modern sense of the word.

According to Lactantius's writing, Diocletian had an *infinitam cupiditatem aedificandi*; Malalas says that he was φιλοκτίστης.⁶⁸ Today we are apt to count mostly the imperial palaces in connection with this statement, and to forget the whole framework of comprehensive public works that were undertaken during the first tetrarchy. Twenty years of relaxation from civil wars and barbarian invasions, and the gradual suppression of local unrest, led to the renovation of the prosperity in cities all round the Empire, hence the major number of public dedications, the revival of overall construction activity.

The Tetrarchan New Deal – with Diocletian as the Roosevelt of the ancient world – is often understood in a formalist way, as a series of legislative and political attempts to halt inflation, overlooking exploits like Galerius's round Balaton, or this one in Split. It is not surprising that for Michael Rostovtzeff Diocletian's reforms and manner of ruling were levers with which the Russian revolution could have been beaten!⁶⁹ All these enterprises were carried out, as Gibbon would put it about Constantinople, with the health, wealth and work of what was left of the genius of the subservient millions! The construction of the Split Palace, then, no kind of 'Imperial Xanadu', as it is often held to be, justified its investment. More than that: its existence enabled antiquity in Dalmatia, even after the 7th century catastrophe, not to be extinguished with a sudden death, but over long centuries to be merged into the modern age, remaining until this day a lesson in and criterion for every creative architectural operation into the tissue of the city, which developed organically within the precise, almost dry geometry of the emperor's palace-cum-factory.

67 WARD-PERKINS 1984, 12, n. 12; FRENCH 1984, 453–454, n. 96, 97: "Cost of these public works must have been enormous, and the labor requirements presume a degree of regimentation of society to an extent hardly imaginable. Lactantius's criticism of the Tetrarchy's building schemes as "mania" was justified."

68 Lact., de mort. pers. 7,8; Mal. ed. DINDORF p. 306,12.

69 FINLEY 1968.

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