

## HYGIENE AND COMMERCE: THE EXAMPLE OF DALMATIAN LAZARETTOS FROM THE FOURTEENTH UNTIL THE SIXTEENTH CENTURY

### HIGIJENA I TRGOVINA: PRIMJER DALMATINSKIH LAZARETA OD 14. DO 16. STOLJEĆA

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#### Summary

*The author proposes to discuss the evolution of the sanitary measures at the end of the Middle Ages in relation with the trade traffic in the Dalmatian ports. Firstly, the notion of the hygiene in Dalmatia, according to the Statutes laws, has been explained. Secondly, the trade stream which crossed the Dalmatian communes. At the end, the main data on the plague epidemics that struck them has been listed. These epidemics alerted the communes to the problem of hygiene connected with the import of infected merchandise. Dubrovnik was the first city in the world to establish the principle of quarantine in 1377. However, in the communes dominated by Venice, even if certain protectionism was practised, the link between plague and trade was not taken seriously still in the fifteenth century, and a better documentation appears only since the sixteenth century. Some »deputies of the health« were in charge to issue a fede di sanita for each departure with merchandise in the sea. However, this control was done occasionally. Only with the establishment of the scale (scala) of Split in 1592, sanitary problem was given more consideration.*

**Key words:** Hygiene, Trade, Dalmatia, Lazaretto, late Middle Age

**Ključne riječi:** Higijena, trgovina, Dalmacija, lazaret, kasni srednji vijek

It was the consequence of commercial traffic that the Black Death attained French, Italian and Spanish ports. The rest of the continent was not spared of the disease that in 1350 reached as far as Scandinavian ports. In two years the disease killed nearly twenty-five millions of people or one quarter of the European population.<sup>1</sup> In the course of the following centuries, the plague appeared in a recurrent fashion.

<sup>1</sup> RISSE Guenter B., *Mending bodies, saving soul! A history of Hospitals*, Oxford University Press, 1999, chap. 4: »Hospitals as segregation and confinement tools«, 191.

Inside the astrological etiology of plague,<sup>2</sup> the corrupted air<sup>3</sup> (miasma), and the hygienic way of living in medieval cities were accused of being the prime suspects for the transmission of the disease.<sup>4</sup> Therefore, the communal authorities imposed sanitary measures upon urban economic centres and surrounding regions. Their purpose was to protect the non-contaminated population and they comprised banning animals from the city, lighting bonfires with sulphur, application of aromatic herbs and incenses and isolation of people suspected of having plague outside the city.<sup>5</sup>

At the end of fourteenth century, a new protective measure was invented: a lazaretto. In order to control from the sanitary point of view, the commercial traffic and the inflow of pilgrims, there were constructed seaports sites reserved for the reception of people and merchandise coming from regions suspected of pestilence. Men and goods were isolated during an 'incubation period' after which they were granted a permission to freely circulate in the city.

From the mid fourteenth century, Dalmatian ports were also concerned about plague epidemics. But before we embark right on the question of lazarettos in Dalmatian cities, the historical background needs to be explained. In order to comprehend the relation between the commercial traffic and epidemics, we should reflect upon the notion of the hygiene in Dalmatia, the economic situation in Dalmatian cities, and finally, the frequency of killer disease (plague) in that province.

## Hygiene, commercial traffic and epidemics

Since the concept of contagion took time to confirm the link between the commercial traffic and the infected merchandises, it seems necessary in the first place to focus on the

<sup>2</sup> Etymologically, the term »*pestilencia*« for plague (*pestis*) means »tempest caused by the stars«, or »period of tempest caused by the starlight«. There were three types of explanation for the appearance of the disease: religious, astrological and »xenophobic«. For the devoted people, the pest epidemic was the direct consequence of God's anger against the sinful population that did not respected God's laws; RAVANČIĆ Goran, »Historiografija o epidemiji Crne smrti s polovice 14. stoljeća«, *Povijesni prilozi* 33, Zagreb (2007.), 195-214 (201-203). For medical practitioners, the constellation of planets was considered as a distant cause of the disease: the hot and wet planet of Jupiter had raised the water from the earth and the harmful vapours taken over by the hot and dry Mars. Such accumulated vapours had attracted the corruption of the air. Finally, popular rumours considered that the Jews were the agents of the plague, being allegedly less struck by the disease and because they were Saturnian type; WEILL-PAROT Nicolas, »La rationalité médicale à l'épreuve de la peste : médecine, astrologie et magie (1348-1500)«, *Médiévales* 46 (2004), 73-88, <http://medievales.revues.org/document884.html>. In Dalmatia, we can also find such astrological explanations. A teacher from Split, James Gaudenzio called Abak, in his sixteenth century diary [published in Pera Janko, »Fragmenti dnevnika«, *Starine* 45, Zagreb (1955), 281-290], lists his relations who died of the 1526-1527 plague. It seems that he blames constellations of Venus, Mars and the Moon for the appearance of the epidemic; PERA Miroslav »Kuga u Splitu 1526-1527«, *Kulturna Baština* 7-8, Split (1978), 78-80.

<sup>3</sup> Consulted on the origin of the plague, French doctors answered in 1348: »We believe that the present epidemic or plague is coming from the air corrupted in its substance and not only altered in its quality«; WEILL-PAROT, »La rationalité«.

<sup>4</sup> Accepting the miasmatic theory of Hippocrates, Galen has added a new factor, *contagium*, according to which the transmission of the disease goes through the persons that have bad breath; BLAŽINA TOMIĆ Zlata, *Kacamorti i kuga. Utemeljenje i razvoj zdravstvene službe u Dubrovniku*, Zagreb-Dubrovnik, 2007, 33-34.

<sup>5</sup> RISSE, *Mending bodies*, 198.

notion of hygiene in the medieval society and its answers on various nuisances which appeared in medieval urban areas.

### **From the private to the public hygiene**

The salubrity was largely dependent on the ecclesiastical concept of stain. In the medieval Christianity, the sin is represented as a stain of the soul, a slur (*macula*). Furthermore, it is indicated by terms of *immunditia* and *sordes*. By analogy, the stain and the stench of the body reveal impurities of the soul. Nevertheless, liturgical texts diverge on the functions of the bath: for some, pleasure to maintain the body is a sign of lust, it incites to the languor and to the sensual delight. To wash the body means to make the soul dirty. Others, on the contrary, recommend a bath as a remedy against temptation, especially ice-cold baths or dumping in cold streams, along with reciting prayers.<sup>6</sup> However, the idea which prevails is that repelling of the dirtiness, as a factor of disorders within the Christian community (moral, and by extinction, corporals), is a positive act.<sup>7</sup> Parallel with that, in the secular world, the multiplication of medical treaties from the twelve century testifies of increasing interest of doctors for the conservation of the health of their patients. Heirs and propagators of the antique Hippocratic-galenic teaching of four humours, these doctors envisage the continuation of the life in these terms: *Sanitas est temperamentums custodiens in homine res naturales secundum cursum nature*. In this context, they recommend two types of baths: the first one, as medicine, cures and strengthens the body from the inside to balance the humours; the second is a gesture of comfort which embellishes the surface of the body in the process of cleaning. *In summa*, the personal hygiene is favorable to the preservation of the health.<sup>8</sup>

As in the private sphere, the stench is the main problem which invaded the public space. Five main reasons caused the pollution of the urban streets. The first reason was in the common nonchalance of the inhabitants. The individuals abandoned their tools on the road, throw waste in front of the doors of their neighbours during the night, got rid of not edible garbage by animals and used the empty waste grounds to pour the surplus of manure pits there. The second one, the natural conditions could have engendered the insalubrity. The absence of lowering in the flat situated in plain surface (for example Split, Trogir and Zadar), or in the low districts, provoked the blocking of normal outflow of sewers towards the river or the sea. On the contrary, cities situated on a steep slope (for instance Dubrovnik and Šibenik) were victims, during thunderstorms, of the flow of nauseous streams which increased with the slope. The third one, the dirt, is also the direct consequence of the erection of surrounding city walls. Canals fitted out in the wall to end in a network of sewer or in a sea were not sufficient, as well as clogging of the garbage in hidden recesses and projections at the borders of the city walls. The fourth reason is the lack of toilets. They were

<sup>6</sup> VINCENSINI Jean-Jacques, »Introduction : »Ils ne sont pas blanchisseurs«. Pensée du désordre et écriture du corps dans la culture médiévale«, *Laver, monder, blanchir. Discours et usage de la toilette dans l'Occident médiéval*, dir. ALBERT Sophie, PUPS Paris 2006, 7-30 (12-14).

<sup>7</sup> Ibid., (18).

<sup>8</sup> LALOUETTE Anne-Laure, »Bains et soins du corps dans les textes médicaux (XIIe-XIVe siècles)«, *Laver, monder*, 33-49 (33, 35,37).

either rare sometimes scattered or not emptied on regular basis, so the piles would have become full of excrements. Quickly saturated, these places of ease polluted the atmosphere and the water in wells. Finally, numerous urban activities damaged the environment<sup>9</sup> (see below). Thus, all these puddles of water, open-air sewers, this accumulated mud provoked unbearable smells and gave an unfavourable appearance to cities.

### Evolution of sanitary measures in suppression of urban insanity

Confronted with violent protest of the populations, and in order to ensure a sufficient hygiene while embellishing the commune,<sup>10</sup> communal authorities set up a device of purification. In Palermo, for instance, were engaged masters of streets, often known under the name »masters of garbage«, which were asked to clean away »*viae magnae*«; in London, this function was entrusted to *beadels* and *rakers* which were obliged to rake out streets with carts of horses and to remove fertilizers and dirt of all kinds.<sup>11</sup> In the same way, from the very beginning of Statute Laws of Dalmatian communes in the second half of the thirteenth and in the fourteenth century,<sup>12</sup> the care of local authorities for sanitary issues was limited to the cleanliness of streets and the control of the hygiene of some crafts activities such as bakers (especially female ones), butchers, fishermen and tanners.<sup>13</sup> According to official documents, it was forbidden to throw out debris, dirty water and other kinds of garbage on the street, under the threat of fine.<sup>14</sup> For hygienic reasons, the communes of Split, Skradin and Trogir prohibited spinning the wool by women while selling fresh, especially dairy, products on the market or in inns. Depending on the case, women caught in violating this regulation had to pay lower or higher fines, either their spinning wheels were broken. The reason of this prohibition is explicitly written in the Spalatin Statute Law: »not to **pollute**« the merchandise.<sup>15</sup>

The attitude toward the domestic animals, for its part, reveals the remains of rustic lifestyle of the city population. Indeed, the inhabitants had the traditional practice to breed animals inside the city walls and to let them roam around their houses, facilities or in the yard.<sup>16</sup> Furthermore, butcheries were situated inside cities, with multiple obligations, some of which did not contribute to the healthiness of the city. Indeed, the butchers had to bring down animals - what supposed that inhabitants bring the livestock inside the urban space -

<sup>9</sup> LEGUAY Jean-Pierre, *La rue au Moyen Age*, ed. Ouest-France, 1984, chap. 2: La pollution médiévale, 53, 56-58.

<sup>10</sup> In its Statute Law from 1530, the coastal city of Rijeka, under the jurisdiction of the Habsburg Empire, prohibited the free circulation of pigs in the city, explaining this measure »because of the cleanliness and the reputation of our city«; HERKOV Zlatko, *Statut grada Rijeke* (henceafter: Statute Rijeka), Zagreb 1948, book IV, chap. 3, 304-305.

<sup>11</sup> HEERS Jacques, *La ville au Moyen Age en Occident. Paysages, pouvoirs et conflits*, ed. Fayard 1990, 303-304.

<sup>12</sup> The written versions of custom law, the communal statutes, appear as following: Island of Korčula (1265), Dubrovnik (1272), Šibenik (1290), Zadar (1305), Split (1312), Skradin (1304/1312 or 1322), Island of Lastovo (1310), Trogir (1322), Island of Hvar (1331).

<sup>13</sup> In Rijeka, it was prohibited that no person could have cleaned his/her laundry or some other unclean staff or to put refuse and pus nearby water wells situated on the main public roads; Statute Rijeka, book IV, chap. 4, 305.

<sup>14</sup> ČORALIĆ Lovorka, *Put, putnici, putovanja - Ceste i putovi u srednjovjekovnim zemljama*, Zagreb 1997, 73.

<sup>15</sup> FABIJANEC Sabine Florence, »Od tržnice do luke. Trgovačka svakodnevnica kasnoga srednjega vijeka«, *Kolo XVI/4*, Zagreb 2006, 188-228 (196).

<sup>16</sup> LEGAY, *La rue*, 59; HEERS, *La ville*, 311.

and to skin them in the butchery.<sup>17</sup> So, the butchers disturbed the whole city-district with the ceaseless load of cattle, the roaring of the slain animals, the smells and the wastewaters.<sup>18</sup>

It can be deduced from numerous statute reformations of decrees concerning urban sanitation that the population could not adapt easily to these measures, so the process of sanitation of the urban life conditions took effect on case-by-case basis. Indeed, the authorities, the communal ones in particular, experienced difficulties both in enforcing decisions concerning health and sanctioning them effectively: the maintenance of streets required additional charges to be imposed on inhabitants and the latter were still accustomed to the rural lifestyle.<sup>19</sup> Thus *Reformationes* of the Statute Law of Zadar from the fifteenth century renewed the enactment against disposing of garbage to streets and squares, under the threat of the 40 *scudos* fine. More so, inhabitants of the city had to sweep the dirt in front of their doors every Saturday, or pay the same fine.<sup>20</sup> Similarly, in the sixteenth century, the count of Split, Jerome Barnardo, reminds that women are prohibited to sell bread and textile products in the afternoon if they had sold cheese in the morning.<sup>21</sup>

The measures of a bigger scope were not fully enacted before the fifteenth century. Individual inhabitants were not the only ones concerned. From that time on, certain corporations were evacuated from the city and slaughterhouses were displaced. In the second half of the fifteenth century that animals, except for horses and donkeys, were banned from the enceinte of Zadar city walls. When a person was caught walking with an animal, he or she would be fined one shilling per a small animal and two shillings per a large one.<sup>22</sup> In 1503, the count of Split forbade the butchers to kill the animals in the butchery, in the street or in the port of Split, under the threat of the fine of twenty shillings per animal.<sup>23</sup> In 1530, the Statute law of Rijeka forbade, under the threat of the twenty shillings fine, the activities of tanners, shoemakers and all other leatherworkers in public places.<sup>24</sup> Indeed, the preparation of leathers requires the closeness of a water source to fill tubs which, unfortunately, dilute hides causing problems of pollution of wells or rivers.<sup>25</sup> For the same counter epidemic reasons, it was prohibited to tie a cow at the main city streets and squares. It was however

<sup>17</sup> FABIJANEC, »Od tržnice«, 199-200.

<sup>18</sup> HEERS, *La ville*, 377.

<sup>19</sup> *Ibid.*, 311.

<sup>20</sup> KOLANOVIĆ Josip, KRIŽMAN Mate, *Zadarski Statut sa svim reformacijama odnosno novim uredbama donesenima do godine 1563.*, Zadar 1997, Reformacije 40, 545.

<sup>21</sup> Državni Arhiv u Zadar (henceafter: DAZd), Splitski Arhiv (henceafter: Sp. Ar.), *Proclamationes comitis Hieronymo Bernardo comitis et capitaneus Spalati*, box. 36, B. 43, liber I, F. II, f. 32, 34, 35'.

<sup>22</sup> Thus pigs had to be taken outside the city. In the case when a pig was found inside the city walls, everyone had a right to kill it. If the owner complained, he would be fined with 40 solid fine; Statut Zadar, Reformacije 38, 545.

<sup>23</sup> DAZd, Sp. Ar., *Hieronymo Bernardo*, box. 36, B. 43, liber I, F. II.

<sup>24</sup> Statute Rijeka, book IV, chap. 4, 305.

<sup>25</sup> Other crafts were also implied, such as manufacturers of wax candles which melt the tallow, manufacturers of parchment and stainers who handle the alum and the coloring agents, barbers-surgeons who fill basins of blood after every heavy losses. Besides that, all of them infect public highways; LEGAY, *La rue*, 58. In fact, the problem was present in all European urban communities. For instance, in Cordoba in Spain, an ordinance decreed in 1435 that it is forbidden to tanners to throw their leather residues in the river bank down into the river. On the other hand, they were obliged to assemble every four months for cleaning the river bank of all their garbage; EDWARDS John, »The Culture of the Street. The Calle de la Feria in Córdoba, 1470-1520«, *Mediterranean Urban Culture 1400-1700*, Exeter 2000, 69-82 (76).

more than a sanitary issue, because it regulated the influx of animals from the hinterland into city slaughterhouses.<sup>26</sup>

### **The main trade branches in Dalmatia**

The transfer of animals figured among the most important branches of commercial traffic in Dalmatian communes. It was part of the large trade in products of animal origin (leather, milk products, wax, wool, honey) that semi-nomadic Vlachs brought from the mountainous hinterland to the Eastern Adriatic seaports. Thanks to the exploitation of these imports and the favourable strategic position at the intersection between the East and North of the continent and the outpost of Mediterranean - the Adriatic Sea, Dalmatian cities construed their economic roles in different ways. In the fifteenth century the independent Republic of Dubrovnik was by far the most politically and economically developed city. Dubrovnik played the key role in the exploitation of Bosnian and Serbian mines before the Ottoman conquest - from the end of the fourteen till the end of the fifteenth century;<sup>27</sup> in comparison with textile industries of Flanders, which lasted from the eleventh, or of Italy, which lasted from the thirteenth century, Ragusan textile industry achieved remarkable though short-term success that lasted almost a century - from the mid-fifteenth to the mid-sixteenth century. Both Christian West and Muslim countries recognized the neutrality of its banner that guaranteed the free trade of textiles, wheat, salt, spices and wine, as well as the role of the privileged shipper of merchandise from the entire Mediterranean, owing to the shipyard competitive to the Venetian one.<sup>28</sup>

On the other hand, the progress of other Dalmatian ports from the early fifteenth century onwards was hindered by the Venetian domination. Zadar formed the allegiance with Venice in 1409, Šibenik in 1412 and Split in 1420. During its subordination to the Croatian-Hungarian crown, Zadar was the most important coastal economic centre, partly due to its political role and partly because of the exploitation of salt mines of the island of Pag, the centre of salt production of the Adriatic. When Venice took away the profit of the salt mines, the most profitable source of the income was amputated from the city. Nevertheless, the city of Zadar had a number of trump cards: it preserved its position as the capital of Dalmatia and the ownership over much of the cultivable land in its surroundings, on the islands and in the hinterland, as well as numerous and various artisan workshops in the city itself. In the same time, Zadar carried out a lively commercial exchange with Adriatic ports from Italy to Albania. Ships from Zadar exported agricultural products, animal products and cheap

<sup>26</sup> ČORALIĆ, *Put, putnici*, 74.

<sup>27</sup> On the investment of capital accumulated through exploitation of Bosnian silver mines into the maritime expansion of Dubrovnik after the Ottoman conquest, see: PRLENDER Ivica, »Mediterranska trgovačka Republika pred izazovom oceana«, *Radovi zavoda za hrvatsku povijest* 37, n° 1, Zagreb 2005, 55-62.

<sup>28</sup> See for example: FORETIĆ Vinko, *Povijest Dubrovnika do 1808*, vol. 1 »Od osnutka do 1526«, Zagreb 1980; STULLI Bernard, *Povijest Dubrovačke Republike*, Zagreb-Dubrovnik 1989; ROLLER Dragan, *Dubrovački zanati u XV. i XV. st.*, Zagreb 1981; *Građa za pomorsku povijest Dubrovnika*, the entire work, Book V, Dubrovnik 1972; KREKIĆ Bariša, *Dubrovnik, Italy and the Balkans in the late Middle Ages*, Variorum Reprints, Londres 1980; AYMARD Maurice, *Venise, Raguse et le commerce du blé pendant la seconde moitié du XVIe siècle*, Paris 1966; , XV XVI , .3, 1952; HOCQUET Jean-Claude, »Commercio e navigazione in Adriatico : porto di Ancona, sale di Pago e marina di Ragusa (XIV-XVII secolo)«, *Atti e memorie*, nuova serie Anno 82, Ancona (1977), 221-254.

textiles in exchange for cereal, luxury products, Italian textiles and oriental spices.<sup>29</sup> Zadar became the main centre for the export of cattle, but Split was also an important port after the opening of the scale (it. scala). In only two years, at the end of the sixteenth century (1590 and 1595), more than 2700 horses was exported from Split.<sup>30</sup> The city also represented the closest point of access to the sea for Bosnian economic centres. Very early on, it developed its role as an intermediary for transport of alimentary products from Balkans to the ports in the eastern Italy. This transit activity was unperturbed by the Ottoman domination over the inland area.<sup>31</sup> The same was valid for Šibenik, with two additional advantages: the production of pitch and salt.<sup>32</sup>

### Interaction between the Black Death and economy

Regardless of the significant importance of commercial traffic realised by Dalmatian cities, their role as mediators between the European East and the Western world made them suffer for several reasons. Their strategic position has enabled them to grow as major economic centres, while their military role on the border between Venetian Dalmatia and Ottoman Empire caused bigger investments in defence system of the cities. Such situation caused the great fluctuation of merchants, craftsmen, soldiers and sailors, who were considered as the main transmitters of the plague germ. Further, because of the lack of urban space, the population was densely inhabited inside the city walls, enabling quick spreading of the disease.<sup>33</sup> Otherwise, there are some opinions regarding the correlation between population growth and the emergence of the plague.<sup>34</sup> There are some estimations according to which in

<sup>29</sup> See for example: RAUKAR Tomislav, *Zadar pod mletačkom upravom 1409-1797*, in: *Prošlost Zadra* III, Zadar 1987; RAUKAR Tomislav, *Zadar u XV. stoljeću: ekonomski razvoj i društveni odnosi*, Zagreb 1977; TRALJIĆ Seid M., »Zadar i turska pozadina od XV. do potkraj XIX. stoljeća«, *Radovi instituta JAZU*, vol. XI-XII, Zadar 1965, 203-220; PIASEVOLI Andrea, »Fragmenti iz ekonomskog života Zadra od XIII. do XVIII st.«, *Zbornik Zadra*, Zagreb (1964), 23-47.

<sup>30</sup> VRANDEČIĆ Josip, »Had an Ottoman Combatant Any Chance to Win the love of the Daughter of the Rector of the Dalmatian Town Zadar? (Islam in Ottoman Dalmatia in the 16th and 17th Century and its Coexistence with the Christian World of Neighbouring Venetian Dalmatia)«, *Radovi Filozofskog fakulteta u Zadru* 34, *Razdio povijesnih znanosti* 21, Zadar 1995, 163-184 (185).

<sup>31</sup> See for example: NOVAK Grga, *Povijest Splita*, vol. III: 1420-1797, Zagreb 1961; NOVAK Grga, »Quaternus izvoza iz Splita 1475-1476«, *Stara hrvatska prosvjeta*, nova serija II 1-2, Zagreb-Knin (1928); NOVAK Grga, *Split u svjetskom prometu* Split 1923; PACI Renzo, »La scala di Spalato e il commercio veneziano nei Balcani fra cinque et seicento«, *Deputazione per la storia patria per le Venetie*, Venezia (1971); PEDERIN Ivan, »Il commune di Spalato e le sue relazione con la Romagna e le Marche ecc. in epoca malatestina (1358-1420)«, *Atti giornata di Studi Malatestiani a Civitanova Marche* 7, Rimini (1990), 31-67.

<sup>32</sup> People of Šibenik imported from Turkish territory products of breeding in exchange for wine, oil, spices, wax and other. In 1553, the value of these exchange represented 50.000 ducats a year; NOVAK Grga, »Šibenik u razdoblju mletačke vladavine 1412.-1797. godine«, *Šibenik. Spomen zbornik o 900. obljetnici*, Šibenik 1976, 135-288 (266). As for pitch, during the period from November 1441 till November 1443 the city exported 139,5 tons of it in the direction of Venice; ŠEBEČIĆ Berislav, »O trgovini bitumenom u Dalmaciji od XII. do XVIII. stoljeća«, *Rudarsko geološko naftni zbornik* 8, Zagreb (1996), 129-138 (1319). Furthermore, as the second producer of salt, after the island of Pag, Šibenik produced approximately 47.140 hl of salt in 1575; PEDERIN Ivan, *Mletačka uprava, privreda i politika u Dalmaciji (1409.-1797.)*, Dubrovnik 1990, 133.

<sup>33</sup> KUNČIĆ Meri, *Od pošasti sačuvaj nas. Utjecaj osmanske opasnosti kužnih epidemija na ikonografiju zavjetnih slika. Primjer Splita i Trogira u XV. i XVI. stoljeću*, Zagreb 2008, 70.

<sup>34</sup> For instance, K. Kiple argued that killer disease often appears in the period of demographic growth; KIPLE Keneth F, »The History of Disease«, *The Cambridge History of Medicine*, 2006, 10-45 (22).

a century, from 1400 to 1500, Dalmatia has suffered nearly twenty plague epidemics.<sup>35</sup> In the sixteenth century their frequency even increased. Between 1418 and 1500 Zadar was struck by twelve epidemic waves.<sup>36</sup> From 1480 to 1483, when economic relations between the Ottoman Empire and the Republic of Dubrovnik intensified, raging plague interrupted the entry of merchandise from Herzegovina and caused a considerable slowdown of economic activities.<sup>37</sup> In Split, the most important epidemics visited the city in 1420, 1456, 1526-1527 and 1572.<sup>38</sup> The plague of 1526-1527 alone killed more than the half of the city population whose number decreased from five thousand (in 1525) to little over two thousand inhabitants after the mentioned plague epidemic.<sup>39</sup> Zadar suffered from three plague epidemics during the sixteenth century.<sup>40</sup> In Šibenik, the most fatal epidemics of plague were recorded in 1456-1457, 1511, 1526-1527, 1529, 1551, 1553-1554, 1556 and 1572.<sup>41</sup> In 1553, the plague occurred once more in Dubrovnik and, for example, forcing an Austrian delegation coming from Rijeka to change their route and stop at the neighbouring port Gabella on the river Neretva.<sup>42</sup> This case shows us how the fine network of economy could be ruined.

Dalmatian cities essentially specialised as transit ports.<sup>43</sup> To sum up, Dubrovnik based its commerce upon trade in non-corruptible goods, such as minerals, textiles and shipbuilding. By contrast, Zadar and Split developed transport of agricultural and animal products that were difficult to preserve in a healthy condition. This is precisely why it took such a long time for sanitary measures to take root. Decrees concerning treatment of animals and their products were repeatedly enacted in the course of more than two centuries. Plague epidemics reduced the size of population and interrupted commercial traffic. These epidemics provoked the organisation of a system of protection against disease, of which lazarettos were the ultimate achievement.

The creation of such a complex institution requested the existence of several preconditions: awareness of the connection between sanitary conditions of humans, goods and infection; political will supported by solid financial means and, finally, active commercial traffic. Also, the state of affairs with respect to the diversity of political situation in Dalmatian cities should

<sup>35</sup> RAUKAR Tomislav, »Komunalna društva u Dalmaciji u XV. st. i u prvoj polovini XVI. stoljeća«, *Historijski zbornik*, XXXV/1, Zagreb (1982), 43-118 (62). Unfortunately, primarily because of the lack of data for the entire region of Balkan, the accurate estimations concerning the population loss and the frequency of appearance of plague epidemics cannot be reconstructed.

<sup>36</sup> RAUKAR Tomislav, *Hrvatsko srednjovjekovlje*, Zagreb 1997, 174.

<sup>37</sup> Божић, Дубровник и Турска, 255.

<sup>38</sup> FISKOVIĆ Cvito, *Splitski lazaret*, ed. Muzej grada Splita, vol. IV, Split 1953.

<sup>39</sup> RAUKAR, *Hrvatsko srednjovjekovlje*, 174.

<sup>40</sup> Not only plague epidemics but also mass destructions caused by the war with Ottomans in the inland were causes of eleven waves of grave famine between 1530 and 1596; RAUKAR, *Hrvatsko*, 174. That is hunger which usually preceded those epidemics and occasionally even lasted in parallel to the plague epidemics; KUNČIĆ M, *Od pošasti sačuvaj nas*, 63. About the link between nutrition and disease, see: chap. Nutrition and Declining Mortality and Nutritional Diseases from KENNETH, »The History of Disease«, (34-35 and 38-41).

<sup>41</sup> ŠKARICA Miloš, »Lazareti sv. Lazara i sv. Marije u Šibeniku«, *Šibenik*, 515-519 (515); GRMEK Mirko Dražen, »Zdravstvene prilike i medicina u Šibeniku do početka XX. stoljeća«, *Šibenik*, 523-539 (527).

<sup>42</sup> MATKOVIĆ Petar, »Putovanja po balkanskom poluotoku za srednjega vijeka: opis Kornelija Duplicija Šepera«, *Rad* 62, Zagreb (1882), 45-113 (62).

<sup>43</sup> An overview of the economic exchanges in Adriatic is given by FABIJANEC Sabine Florence. See: »Gli scambi economici sulla costa adriatica orientale nei XV-XVI secoli«, in *Raukarov zbornik*; Zagreb 2005, 671-690.



be taken into account. Consequently, which one among these three factors was crucial for the establishment of lazarettos? Was a lazaretto a static institution, or did it undergo processes of enlargement and improvement and if it did, according to which criteria and based on which motivations?

### **From the Dubrovnik quarantine to the Split lazaretto: two centuries of stumbling in the dark**

The process of foundation of a permanent sanitary institution controlling the non infection of the men and goods which were included in trade took about two centuries to reach its goal. In the meanwhile, the various heath houses were more an ad-hoc solutions for solving the threat. As it is so, it has to be firstly to point out, in order to avoid confusion that the definition of terms »hospital«, »leprosaria« and »lazaretto« has evolved during the centuries.

#### **Some definitions: hospital, leprosaria, lazaretto**

The term »hospital« owes its foundation to the idea of Christian charity. These pious institutions (»hospice«, which is more suitable term than »hospital«) were founded either as an outgrowths of religious houses, or as a private initiative of healthy citizens,<sup>44</sup> being in this case often ephemeral and modest. Taking their expansion from the twelfth century, medieval hospitals remained most often associated with a religious institution - the final goal being more that the soul is saved than the body cured. In Dalmatia, first hospitals appeared during the period of prosperity and urban growth in the thirteenth and fourteenth century. Zadar, as the leader in the number and the early date of foundation of hospitals, is the first city to have a hospital, of St. Martin, founded in 1254 by Semitecolo. This abbot of the Benedictine abbey of St. Grisogono donated a house in the suburbs to the communal authorities for the coverage of the poor of the city. Then in 1296, a nobleman, Cosa Saladin, initiated the foundation of a hospital for twelve poor men, including the foundation of a small friary, a Franciscan church, a pharmacy and a garden. Another nobleman, Louis Matafari, founded the hospital of St. Bernardin in 1303, under the governance of the abbesses of the Benedictine monasteries of St. Mary and St. Nicholas. In Split, the fraternity of the *Santo Spirito*, founded in 1304, was probably continuously in charge of some hospital, but this *hospedal di San Spirito* is mentioned in documents only in 1564; the previous documentation is lacking. Another confraternity of *Santo Spirito* is evidenced in Trogir. This confraternity governed and probably founded the communal hospital dating from 1357. In Dubrovnik, the patrician

<sup>44</sup> In Zadar, for instance, rich merchants bequeath some money or/and goods to feed and dress the poor and even sometimes to ensure them a bed in one of these hospices. Furthermore, a very active trader, Gregory Mrganić, in the 1440-es started the construction of a hospital (*hospitales*) near the St. Anastasia church, to take care of thirteen poor people of both sex. Strangers too are accepted in this institution to be cured, but with condition that they are not infected by plague; FABIJANEC Sabine Florence, »Društvena i kulturna uloga zadarskog trgovca u XIV. i XV. stoljeću«, chap. c) Pobožnost tijekom života i neposredno prije smrti, *Zbornik odsjeka za povijesne znanosti Zavoda za povijesne i društvene znanosti HAZU* 22, Zagreb (2004), 55-120 (113-114).

Stefano de Sargo ordered the built of a Franciscan infirmary in 1346 with six rooms and two fireplaces, since one of the first almshouses was founded on the island of Lokrum in 1359, under the governance of the Benedictine monastery. Generally speaking, most of these communal hospitals founded by individual benefactors were consequently small and located in converted private or religious buildings.<sup>45</sup>

The »leprosaria«, as leper asylums, took their extension in the twelfth and thirteenth centuries, consisting in buildings that erected outside the community.<sup>46</sup> Since the patron saint of the leprous was St. Lazarus, these institutions are frequently designed or linked with his name,<sup>47</sup> and called in the literature »lazaretto«. But, with the decline of leprosy, these leprosaria were used to isolate individuals suspected of carrying infectious diseases, the insane and the indigent, and some of the lazaretto being transformed into hospitals. So, when the bubonic plague appeared two centuries after the first leprosaria, these same buildings, leprosaria, were requisitioned as the first plague hospitals<sup>48</sup> - and the name of lazaretto remaining, thus creating confusion in the use of this word.

### The first world quarantine in Dubrovnik

Besides being an autonomous city-state, Dubrovnik was the first city in the Mediterranean to organise a pesthouse in 1377<sup>49</sup> and to introduce the principle of the longer time isolation of potentially plague-infected individuals and merchandises - quarantine.<sup>50</sup> People and goods were isolated thirty days on two islands, Mrkan and Bobara, in the vicinity of Cavtat.<sup>51</sup> Thus, Dubrovnik surpassed the other city-states, like for instance Venice, which adopted the quarantine, with an isolation of forty days, in 1423.<sup>52</sup> From 1390, the commune of St. Blaise employed officials in charge of prohibiting the access to the city to all those who come from infested places and regions, as well as sanctioning trespassers. Informally, these officials were called *officialles contra venientes de locis pestiferis* or even *officialles ad providendum super venientibus de locis pestiferis*.<sup>53</sup> Their functions were temporary and connected with the pest threat. In the beginning of the fifteenth century, the commune created a special

<sup>45</sup> BENYOVSKY Irena, »Between St. Mark and St. Blaise: Late Medieval and Early Modern Dalmatian Hospitals«, *Medicina e storia* 7, Firenze 2007, 5-36 (7-8, 10, 12, 14, 16-17).

<sup>46</sup> In Dubrovnik, a first regulation on *Leprosi in civitate et districtus* is mentioned in the city's statute of 1272. A site was provided outside the city walls for the sick, lepers being considered as »polluted ones«. Since 1410, the number of lepers living in self-regulated community shouldn't have exceeded more than 20 lepers together; *Ibid.*, (17-18).

<sup>47</sup> Just as short examples taken from Zadar, in a sales contract from 1379 between two drappers, the limits (*confines*) of a possession situated outside the city are defined by the vicinity of the »*hospitale sancti Lazari*«; STIPIŠIĆ Jakov, *Inventar dobara Mihovila suknara pokojnog Petra iz godine 1385.*, Zadar 2000, doc. 26, 122-123. In 1440, Lucia, widow of Benedict de Galelis, left in her testament 40 pounds to the »*pauperibus sancti Lazarii extra Jadram*«; DAZd, *Johannes de Calzina*, B. I, F. I, f. 37'.

<sup>48</sup> PORTER Roy, »Hospitals and Surgery«, *The Cambridge History*, 176-210, (181-183).

<sup>49</sup> *Ibid.*, (183).

<sup>50</sup> KEČKEMET Duško, »Prilozi opisu i povijesti splitskog lazareta«, *Pomorski zbornik* 3, Rijeka (1975), 377-385 (378).

<sup>51</sup> GRMEK Mirko Dražen, »Le concept d'infection dans l'Antiquité et au Moyen Age, les anciennes mesures sociales contre les maladies contagieuses et la fondation de la première quarantaine à Dubrovnik (1377)«, *Rad JAZU* 384, Zagreb (1980), 9-55 (39).

<sup>52</sup> From 1348 on, *Serenissima* organised sanitary protective measures. In the fatal 1348 potentially infected goods, ships and persons were isolated on an island in the lagoon; RISSE, *Mending*, 202. GRMEK in »Le concept d'infection« analyses and corrects claims made by George Sticker about the anteriority of quarantine in Venice to the Dubrovnik one.

<sup>53</sup> BLAŽINA TOMIĆ, *Kacamorti*, 85-86.

public health magistrate, and then the former »unnamed« officials were officially designed as *officiales cazzamortuorum* or *cazzamorti*.<sup>54</sup> Moreover, the Republic established the first (anti plague) lazaretto in the world, on the island of Mljet in 1397,<sup>55</sup> while Venice set up a hostel on the island of Santa Maria six years later, as a consequence of the epidemic of 1399-1400, in order to isolate travellers and infected local inhabitants.<sup>56</sup> It is only from 1423 that Venice built one lazaretto on an island of its lagoon.<sup>57</sup> Thus, in these two urban economic centres the system of the sanitary protection was evolving in response to the imminent danger.

Dubrovnik had a pioneering role in the advancement of other instruments of the defence against disease. In the fifteenth century houses contaminated by the infection were burnt down. However, the government prohibited burning the objects whose value was over 5 *perpers*. This decree applied to the quarantined ships as well, even if they were suspected to be pestilential.<sup>58</sup> At the same time, Venice burnt all infected goods and proposed the exposure of textiles to sunlight and fresh air and also to cold and hot water washings. Some fabric was treated with salt water.<sup>59</sup> In the fifteenth century Dubrovnik didn't have a resolute policy towards the plague problem, because the short-term economic interests prevailed over the long-term goal of fighting the disease. Epidemics from the end of fifteenth century revealed the fragility of such calculations. As the characteristics and functioning of lazaretto of Dubrovnik were already discussed in the literature, let us observe other economic centres.<sup>60</sup>

### **Dalmatian seaports and health institution under external political power: fragmental answers to sanitary problems**

In other Dalmatian seaports, except for the designation of particular places to burn the infected staffs and furniture,<sup>61</sup> the formation of a stabile protection system lasted much longer. Zadar and Split were governed by an external power. They had to endure continual confrontations with their Ottoman neighbours, which considerably weakened their economic growth. The plague of 1460 initiated the construction of a 'new-fashioned' lazaretto (not any more for lepers) within the city walls of Zadar.<sup>62</sup> The construction of a former lazaretto went back to the second half of the fourteenth century. It was located outside the city. In 1426, it contained 22 rooms, 11 for men and 11 for women. It was a place for care of the poor and the leprous persons.<sup>63</sup> In Šibenik, the initiative pour the construction of a lazaretto applying the principle of quarantine came from rich individual person. In 1427, Anthony, a pharmacist

<sup>54</sup> *Ibid.*, 93.

<sup>55</sup> GRMEK, »Le concept d'infection«, (39).

<sup>56</sup> RISSE, *Mending*, 202.

<sup>57</sup> PORTER, »Hospitals«, (183).

<sup>58</sup> FISKOVIĆ Cvito, »Splitski lazaret i leprozi«, *Acta historica medicinae pharmaciae veterinae*, Anno III 1-2, Zagreb 1963, 5-25 (6).

<sup>59</sup> RISSE, *Mending*, 204.

<sup>60</sup> See: BENYOVSKY LATIN, »Between St. Mark«, chap.: Leper houses and lazarettos, Private hospitals and poorhouses, Confraternity hospitals, Foundling hospitals, The City hospital (17-26) and BLAŽINA TOMIĆ, *Kacamorti*.

<sup>61</sup> ŠKARICA, *Lazareti*, (515).

<sup>62</sup> PERIŠIĆ Šime, *Razvitak gospodarstva Zadra i okolice u prošlosti*, Zagreb-Zadar 1999, 121.

<sup>63</sup> RUNJE Petar, »Lazaret u predgrađu srednjovjekovnog Zadra i njegovi kapelani«, *Radovi Zavoda za povijesne znanosti HAZU* 39, Zadar 1997, 81-117.

from Rome, bequeathed 300 pounds for the construction of a lazaretto outside the city, on the cape of Mandalina. There the goods were disinfected while the interned people were examined by a barber. This lazaretto was especially active during periods of epidemics. As a consequence of the plague of 1526-1527, a new lazaretto was built in Paklina, outside the city walls.<sup>64</sup>

In the same time, lazarettos were being constructed in numerous Italian cities and towns. The second Venetian lazaretto, *lazaretto nuovo*, was founded in 1468. Similar projects were realised in Mantua (1450), Ferrara (1464), Florence (1463), Genoa (1467), Sienna (1478) and Milan (1488). The principle of quarantines was carefully respected so they were located outside cities, in the proximity of road intersections (at the mainland) or on the islands.<sup>65</sup> More generally, health boards, including laymen, medical advisers, quarantine and other decisions like the cleaning of streets or the compiling lists of the dead, practised even in small communities, were originally temporary. It is only in the beginning of the sixteenth century that in bigger cities, at least in Italy, these health boards had become permanent.<sup>66</sup> Therefore, the lazarettos of Zadar corresponded to the contemporary trend towards building houses for the pestilential. However, the relationship between the commercial traffic and the increased opportunity for spreading of the infection was not really understood and accepted because in the case of Zadar, the building was built up within the city walls.

More sources on Zadar lazaretto date from sixteenth century. An official document from 1520 refers to the confraternity of Santa Maria della Cappella. The count (*comes*) of the city, Peter Marcello, granted this fraternity the right to engage in commercial operations, such as the provision of wheat, and guaranteed it a privileged status in the case of a legal conflict with some other involved parties. The role of this confraternity was to care for the pestiferous.<sup>67</sup> This document does not clarify the relationship of the confraternity with the lazaretto. But, if we may draw a parallel with the Italian practice, lazarettos were considered to be charitable institutions managed by either communal, ecclesiastical authorities, or by private persons and charitable and professional organizations such as confraternity.<sup>68</sup> It may be presumed that the above-mentioned confraternity took part in the nursing of the sick in the Zadar lazaretto.

Probably due to the scarcity of extant sources, the impression remains that Venetian authorities in Zadar did not take seriously the problem of contagion connected with the commercial traffic. At least, we can presume that, as for the hospital policy, the situation is different when comparing Dalmatia cities, submitted under the power of Venice which tended to adopt policies suitable to its own purposes, with Dubrovnik, within which the ruling elite had a free hand to control any organisation.<sup>69</sup> There was no wide-ranging project; the measures were not observed unless in the case of immediate necessity. In the numerous

<sup>64</sup> GRMEK, »Zdravstvene«, (526-527).

<sup>65</sup> RISSE, *Mending*, 203.

<sup>66</sup> NUTTON Vivian, »The Rise of Medicine«, *The Cambridge*, 46-70 (67).

<sup>67</sup> DAZD, *Atti del conto di Zara Pietro Marcello*, vol. I, f. 339'.

<sup>68</sup> RISSE, *Mending*, 205.

<sup>69</sup> BENYOVSKI LATIN, »Between St. Mark«, (14, 27).

reports of Venetian officials, there is but one mention of the lazaretto. In 1556 the captain Jerome Delphino referred to the existence of sanitary officials in charge of the lazaretto. A chamberlain (*camerlengo*) oversaw revenues. Financial incomes of the lazaretto were considered to be mediocre.<sup>70</sup> The poor income of the second Zadar lazaretto should not lead us to conclude about the overall poor state of the commercial transit. Judged by the local standards, the city was regularly supplied with articles for its own consumption that were coming from Ottoman neighbourhood: meat, milk products, and raw materials for artisans. Thereafter, it could be supposed that this depository was used only to record transit of goods that were being transported by the maritime route, while products coming from the continental part of the Ottoman Empire remained unexamined and unrecorded. Additionally, the control of the sanitary status of goods and health of people was apparently not effected in a systematic way as it seems that it took place only in the case of an imminent epidemic. Moreover, in the case of Zadar the lazaretto was not isolated from the city, which increased the possibility of contamination. The Venetian authorities intervened only in the seventeenth century, after the plague of 1630. Around 1641 the third lazaretto, named Saint Marco, was established on the island of Ošljak near Zadar, after serving as a storage house for Ottoman merchandises.<sup>71</sup> Thirty years later, another lazaretto was founded on the island of Galevac, situated opposite to the island of Ošljak. Soon after, it was transformed into a quarantine site for ships.<sup>72</sup>

The situation in Split is relatively better documented. The date of the establishment of the first lazaretto is not known. However, a report of an anonymous city official from 1577 informs us in detail about its organisation. The lazaretto consisted of wooden barracks without doors or partitions. Merchandise was stored without respect to the proprietor. Even more, some products were never recovered and fragile objects were deposited without any protection. As a consequence, the official thought that the landing piers, storage houses and other depositories (*fondachi*) were not adequate for their purpose and for needs of their users any more.<sup>73</sup> The stock was handled with carelessness that could have augmented the risk of the plague contamination. That is why this anonymous official decided to intervene and to support the large-scale project envisaged by a Split Jew, Daniel Rodriguez. The latter proposed to improve the commercial traffic between Venice and the Ottoman Empire by way of meeting requirements necessary for directing the entire transit of goods to the Split port. Plans for improvement included building roads, organising armed naval convoys to accompany merchant ships and also the erecting a lazaretto. In 1580, the Venetian Senate gave permission for the establishment of a lazaretto with a customhouse southeast from the walls of the Diocletian palace. The construction of building was assigned to Spalatin

<sup>70</sup> »Relationes viri nobili ser Hieronymo Delphini capitanei Jadre, 1556 30 mai«, in: LJUBIĆ Šime, *Monumenta spectantia historia Slavorum meridionalum*, vol. 11, Zagabriae (1880), 87.

<sup>71</sup> PIASEVOLI, »Fragments«, (42).

<sup>72</sup> PERIŠIĆ, *Gospodarski*, 121.

<sup>73</sup> »Del commercio di Spalato nel secolo XVI« in: SOLITRO Vicko, *Documenti storia sull'Istria e la Dalmazia*, Venezia 1844, 365-366.

constructor Vincent Bugardelo and at the expense of Daniel Rodriguez. Before the lazaretto began to work in 1592, an office was charged with issuing sanitary certificates.<sup>74</sup>

Two texts illustrate the function of this type of certificate, already mentioned in the case of Zadar. In May 1581, Nicolò Correr, the count of Split, decreed that every person wishing to travel to the other side of the Adriatic had to obtain a *fede di sanita*, signed by the count, before his or hers departure.<sup>75</sup> Five months later, the count announced that the same measures introduced by Tragurin count, should be enacted in Split as well - but unfortunately we have no indications about the content of these measures. The city of Dubrovnik in that time suspected of the plague contamination so, for security reasons, every person arriving from Dubrovnik or surrounding areas was obliged to get sanitary certificate in order to obtain the right of trade in Split. Also, those who arrived by ship had to obtain the right from sanitary office to land. Anyone contravening that order, following the arbitration of count, would either be banned from the city or escorted to galleys, his ship would be burnt, and finally, he would have to pay a twenty-five pound fine.<sup>76</sup>

In the end of sixteenth century, sanctions concerning the infringement of protective regulations were at their strictest. They reveal the increased awareness of the impact of commercial traffic on the augmented risk of contamination. But, once more, the protection was oriented in the first place towards the maritime traffic. Land transport was far less controlled. It is true that frequent military conflicts at the borderline between Dalmatia and Ottoman Empire hindered and blocked continental travel. It is therefore not surprising that the project of the Split port of call took place during a peaceful period, in 1592. Many Venetian accounts and historical works were testimonies of this project of international importance.

## The 1592 Spalatin port of call

In order to diminish the growing importance of Western states oriented towards the Atlantic Ocean, Venice and the Ottoman Empire strengthened their political and economic relations. One of the most evident manifestations of this policy was the construction of the Spalatin port of call. Its objective was to accommodate a large quantity of merchandise and people arriving from the Oriental mainland, to disinfect them and then to convey them across the Adriatic Sea to the Republic of Saint Marco.<sup>77</sup> The first lazaretto in the port comprised three buildings. The two that followed were built after the Candiotte war (1645-1669). According to the later descriptions of the final appearance of the lazaretto, the construction consisted of six spaces.

The first complex, reserved for custom officials, was composed of several one-storey buildings, grouped around a court with a cistern. This court allowed access to another

<sup>74</sup> FISKOVIĆ, *Splitski lazaret i leprozij*, 6.

<sup>75</sup> DAZd, Sp. Ar., *Proclamationnum unicum di Nicolò Correr dal 21. XII. 1580 al 23. V. 1583*, box 166, vol. 122, fasc. V, f. 72.

<sup>76</sup> *Ibid.*, f. 91.

<sup>77</sup> *Ibid.*, f. 91.

cluster of stone houses. One of the centrepieces of this group was a freshwater well. Water from this well had a distinct sulphurous odour, which reminds us that elsewhere in Europe sulphur was often used as a disinfectant. In Split too this well was not used as a source of potable water for humans, but for watering numerous beasts of burden, rinsing clothes and disinfecting merchandise.<sup>78</sup> This one-storey complex comprised the residence of the Ottoman *emin*, a bakery, an arms warehouse and the apartment of the lazaretto guard. The third complex, situated in the middle, represented the central point of disinfection. Storehouses encircled two courts with one freshwater well placed in the north-western part. The fourth space comprised stalls and five warehouses at the ground floor level and guest rooms upstairs. The fifth group encompassed two spaces. First space comprised pits used for washing merchandise and in the second wax was being dried. The last complex included two courts, each with a cistern in its centre. Around those courts stables were erected to accommodate horses and caravan mules; storehouses, guest rooms and lodgings of the lazaretto guard were furnished also.<sup>79</sup> A solid fortification with a central tower assured additional defence against pirates from the coastal side of the edifice.<sup>80</sup>

The administration of the complex was assigned to the lazaretto administrators (*priori*). The lazaretto personnel also included disinfectors (*sboradori*) usually of Italian origin, guards (*guardian*) from Split, Venice, Brescia and Bergamo, lower-ranking sanitary officials from Split or from Brescia (*fante della sanità*, *fante in fabbrica*) and porters (*fachin*) mostly from Brescia, city that was also under the Venetian domination.<sup>81</sup>

Accordingly, the economic wager became - such as the exclusive right of transit from the Ottoman territories and economic survival - sufficiently important to force Venice to seriously act upon the protection of the Split population from the plague. From that time onwards buildings were made of stone, water baths were employed and, this time, the flow of merchandises coming via continental roads was taken into account. Certainly, past wars and conflicts in the inland took their toll in a way of hampering the activity of this institution of the international importance. When the Candiotte war broke out in 1610, the spalatin lazaretto was closed while, on the other hand, the Dubrovnik lazaretto took this opportunity to its own advantage as it received Ottoman and Venetian merchants.<sup>82</sup>

However, this jewel of stone building hid a serious flaw: it was too close to the city. An eighteenth century Split physician Jules Bajamonti, in his *Memorie della città di Spalatro in Dalmazia*, argued that the lazaretto was the very reason for the emergence of plague in Split. As the lazaretto was situated far away from the border with Ottomans and close to the city walls, Ottoman caravans had to pass through inhabited places to reach it. Consequently, they were in the position to contaminate the population. Although customs officials were

<sup>78</sup> On freshwater wells in Split from the Middle Ages to nineteenth century, see PIPLOVIĆ Stanko, »Stari bunari u Splitu«, *Kulturna Baština* 20, 15, Split (1990), 81-94, and in particular on the Split lazaretto on pages 90-91.

<sup>79</sup> KEČKEMET, »Prilozi«, (380-381).

<sup>80</sup> *Ibid.*, (379).

<sup>81</sup> BAJIĆ-ŽARKO Nataša, »Zvanja i zanimanja u lazaretu krajem XVI. st. do tridesetih godina u XVII. st.«, *Kulturna Baština* 14/9, Split (1983), 90-91.

<sup>82</sup> ČIČIN-ŠAIN Čiro, »Pisma Marka Kavanjina, splitskog trgovaca iz prve polovine XVII. stoljeća«, *Starine* 44, Zagreb (1952), 105-226 (107).

informed of risks of epidemics appearing in Bosnia, peasants who were running away from the danger would often managed to infiltrate the Venetian territory. Moreover, robbers that attacked Ottoman caravans and travellers took infected things with them. Further, members of convoys did not respect the time limits of isolation regulations and walked around towns without permission. Once again the impression of negligence remains in face of the dangers of contagion due to the commercial traffic.<sup>83</sup>

Dalmatian lazarettos were constructed, equipped, fortified, and enlarged in the course of several centuries. Such a long process of reconstructing and improving may be observed throughout Europe. Each serious epidemic wave would induce Venice to set up yet another location for isolation and care of the pestilential. In the course of seventeenth century numerous new edifices appeared both in the North and in the South of Europe. For example, Paris built a new lazaretto complex in 1607, Dubrovnik in 1628 and Genua in 1657. The before-mentioned ecclesiastical authorities left the administration over lazarettos to the secular government.<sup>84</sup>

In a way, it would be possible to conclude that the successive reconstructions of lazarettos in Dalmatia followed the general European trends of prevention measures. However, only the autonomous Republic of Dubrovnik reacted quickly, established the quarantine and isolated merchants and others outside the city. By contrast, other Dalmatian cities depended on the political and economic interests of the *Serenissima*. Although Venice itself was well advanced in the matter of hygiene and public health, the application of these measures in Dalmatian communes was rather belated. During the time when the Republic of St Marco concentrated on the organisation of the defence of its territories (repairs of fortifications, maintenance of mercenary garrisons etc.), the anti-epidemic protective systems of Split and Zadar were left in a mediocre state and oriented mainly towards the protection of Venetian merchants. When the strategic situation changed, Zadar managed to erect a lazaretto in an isolated spot - on an island, and Split benefited from one of the most elaborated complexes in the entire Mediterranean that was built at the expense of a single person. Even so, the plan was not without a fault. The ever-lasting greed pushed numerous actors of the commerce to disregard and violate principles of prevention and to become life-threatening factors in the chain of the transmission of plague.

## Sažetak

U radu se razmatra razvoj sanitarnih mjera krajem srednjeg vijeka, a u vezi s trgovačkim prometom dalmatinskih luka. Prvo se razjašnjava poimanje higijene u Dalmaciji prema statutima. Drugo, ukazuje se na trgovačke tokove koji prodiru kroz dalmatinske komune. Naposljetku se ispisuju glavni datumi i razdoblja nastajanja kužnih epidemija koje zadiru u njih. Te su epidemije probudile svijest o problemu higijene povezane s uvozom zaražene

<sup>83</sup> For Italian original see: FISKOVIĆ, »Splitski lazaret«, e. 31 (20-21).

<sup>84</sup> RISSE, *Mending*, 205.



robe. Dubrovnik je prvi grad na svijetu koji je uspostavio načelo karantene 1377. i sagradio lazaret 1397. godine. Međutim, u komunama pod mletačkom dominacijom, iako su izvedene neke mjere zaštite, veze između kuge i trgovine u XV. stoljeću još nisu uzete za ozbiljno, a bolja dokumentacija se pojavljuje tek od XVI. stoljeća. Izvjesni »providuri zdravlja« su zaduženi za izvadak *fede di sanita* za svaki odlazak robe putem mora. Ipak, taj je nadzor bio privremen, a tek s uspostavom »splitske skele« 1592. sanitarni su problemi uzeti više u obzir.

### Unpublished Sources

Državni Arhiv u Zadru (DAZd), *Atti del conto di Zara Pietro Marcello*, B. I.

DAZd, Notary *Johannes de Calzina*, B. I, F. I.

DAZd, Splitski Arhiv (Sp. Ar.), *Proclamationnum unicum di Nicolò Correr dal 21. XII. 1580 al 23. V. 1583*, box 166, B. 122, F. V.

DAZd, Sp. Ar., *Proclamationes comitis Hieronymo Bernardo comitis et capitaneus Spalati*, box. 36, B. 43, liber I, F. II

### Published Sources

HERKOV Zlatko, *Statut grada Rijeke*, Zagreb 1948.

KOLANOVIĆ Josip, KRIŽMAN Mate, *Zadarski Statut sa svim reformacijama odnosno novim uredbama donesenima do godine 1563.*, Zadar 1997.

LJUBIĆ Šime, *Monumenta spectantia historia Slavorum meridionalum*, vol. 11, Zagabriae 1880.

MATKOVIĆ Petar, »Putovanja po balkanskom poluotoku za srednjega vijeka: opis Kornelija Duplicija Šepera«, *Rad* 62, Zagreb (1882), 45-113.

SOLITRO Vicko, *Documenti storia sull'Istria e la Dalmazia*, Venezia 1844.

STIPIŠIĆ Jakov, *Inventar dobara Mibovila suknara pokojnog Petra iz godine 1385.*, Zadar 2000.

### Literature

BAJIĆ-ŽARKO Nataša, »Zvanja i zanimanja u lazaretu krajem XVI. st. do tridesetih godina u XVII. st.«, *Kulturna baština* 14/9, Split (1983.), 90-91.

BENYOVSKY LATIN Irena, »Between St. Mark and St. Blaise: Late Medieval and Early Modern Dalmatian Hospitals«, *Medicina e storia* 7, Firenze 2007, 5-36.

BLAŽINA TOMIĆ Zlata, *Kacamorti i kuga. Utemeljenje i razvoj zdravstvene službe u Dubrovniku*, Zagreb-Dubrovnik, 2007.

BOŽIĆ Ivan, *Dubrovnik i Turska u XV i XVI veku*, knj. 3, Beograd 1952.

- ČIČIN-ŠAIN Ćiro, »Pisma Marka Kavanjina, splitskog trgovaca iz prve polovine XVII. stoljeća«, *Starine* 44, Zagreb (1952.), 105-226.
- ČORALIĆ Lovorka, *Put, putnici, putovanja - Ceste i putovi u srednjovjekovnim zemljama*, Zagreb 1997.
- EDWARDS John, »The Culture of the Street. The Calle de la Feria in Córdoba, 1470-1520«, *Mediterranean Urban Culture 1400-1700*, Exeter 2000, 69-82.
- FABIJANEC Sabine Florence, »Društvena i kulturna uloga zadarskog trgovca u XIV. i XV. stoljeću«, *Zbornik Odsjeka za povijesne znanosti Zavoda za povijesne i društvene znanosti HAZU* 22, Zagreb (2004.), 55-120.
- FABIJANEC Sabine Florence, »Od tržnice do luke. Trgovačka svakodnevica kasnoga srednjega vijeka«, *Kolo* XVI/4, Zagreb 2006., 188-228.
- FISKOVIĆ Cvito, *Splitski lazaret*, ed. Muzej grada Splita, vol. IV, Split 1953.
- FISKOVIĆ Cvito, »Splitski lazaret i leproziji«, *Acta historica medicinae pharmaciae veterinae*, Anno III 1-2, Zagreb (1963.), 5-25.
- GRMEK Mirko Dražen, »Le concept d'infection dans l'Antiquité et au Moyen Age, les anciennes mesures sociales contre les maladies contagieuses et la fondation de la première quarantaine à Dubrovnik (1377)«, *Rad JAZU* 384, Zagreb (1980.), 9-55.
- GRMEK Mirko Dražen, »Zdravstvene prilike i medicina u Šibeniku do početka XX. stoljeća«, *Šibenik. Spomen-zbornik o 900. obljetnici*, Šibenik 1976., 523-539.
- HEERS Jacques, *La ville au Moyen Age en Occident. Paysages, pouvoirs et conflits*, ed. Fayard 1990.
- KEČKEMET Duško, »Prilozi opisu i povijesti splitskog lazareta«, *Pomorski zbornik* 3, Rijeka (1975.), 377-385.
- KIPLE Kenneth F., »The History of Disease«, *The Cambridge History of Medicine*, 2006, 10-45.
- KUNČIĆ Meri, *Od pošasti sačuvaj nas. Utjecaj osmanske opasnosti kužnih epidemija na ikonografiju zavjetnih slika. Primjer Splita i Trogira u XV. i XVI. stoljeću*, Zagreb 2008.
- LALOUETTE Anne-Laure, »Bains et soins du corps dans les textes médicaux (XII<sup>e</sup>-XIV<sup>e</sup> siècles)«, *Laver, monder, blanchir. Discours et usage de la toilette dans l'Occident médiéval*, dir. ALBERT Sophie, PUPS Paris 2006, 33-49.
- LEGUAY Jean-Pierre, *La rue au Moyen Age*, ed. Ouest-France, 1984.
- NOVAK Grga, »Šibenik u razdoblju mletačke vladavine 1412-1797«, *Šibenik. Spomen-zbornik o 900. obljetnici*, Šibenik 1976., 135-288.
- NUTTON Vivian, »The Rise of Medicine«, *The Cambridge History of Medicine*, 2006, 46-70.
- PEDERIN Ivan, *Mletačka uprava, privreda i politika u Dalmaciji (1409. - 1797.)*, Dubrovnik 1990.
- PERA Janko, »Fragmenti dnevnika«, *Starine* 45, Zagreb (1955.), 281-290.
- PERA Miroslav, »Kuga u Splitu 1526. - 1527.«, *Kulturna baština* 7-8, Split (1978.), 78-80.
- PERIŠIĆ Šime, *Razvitak gospodarstva Zadra i okolice u prošlosti*, Zagreb-Zadar 1999.
- PIASEVOLI Andrea, »Fragmenti iz ekonomskog života Zadra od XIII. do XVIII. st.«, *Zbornik Zadra*, Zagreb (1964.), 23-47.
- PIPLOVIĆ Stanko, »Stari bunari u Splitu«, *Kulturna baština* 20, 15, Split (1990.), 81-94.
- PORTER Roy, »Hospitals and Surgery«, *The Cambridge History of Medicine*, 2006., 176-210.

- PRLENDER Ivica, »Meditranska trgovačka Republika pred izazovom oceana«, *Radovi Zavoda za hrvatsku povijest* 37, n° 1, Zagreb 2005., 55-62
- RAVANČIĆ Goran, »Historiografija o epidemiji crne smrti s polovice 14. stoljeća«, *Povijesni prilozi* 33, Zagreb (2007.), 195-214.
- RAUKAR Tomislav, »Komunalna društva u Dalmaciji u XV. st. i u prvoj polovini XVI. stoljeća«, *Historijski zbornik*, XXXV/1, Zagreb (1982.), 43-118.
- RAUKAR Tomislav, *Hrvatsko srednjovjekovlje*, Zagreb 1997.
- RISSE Guenter B., *Mending bodies, saving soul! A history of Hospitals*, Oxford University Press, 1999.
- ŠEBEČIĆ Berislav, »O trgovini bitumenom u Dalmaciji od XIII. do XVIII. stoljeća«, *Rudarsko-geološko-naftni zbornik* 8, Zagreb 1996., 129-138.
- ŠKARICA Miloš, »Lazareti sv. Lazara i sv. Marije u Šibeniku«, *Šibenik. Spomen-zbornik o 900. obljetnici*, Šibenik 1976., 515-519.
- VINCENSINI Jean-Jacques, »Introduction : «Ils ne sont pas blanchisseurs». Pensée du désordre et écriture du corps dans la culture médiévale«, *Laver, monder, blanchir. Discours et usage de la toilette dans l'Occident médiéval*, dir. ALBERT Sophie, PUPS Paris 2006, 7-30.
- VRANDEČIĆ Josip, »Had an Ottoman Combatant Any Chance to Win the love of the Daughter of the Rector of the Dalmatian Town Zadar? (Islam in Ottoman Dalmatia in the 16th and 17th Century and its Coexistence with the Christian World of Neighboring Venetian Dalmatia)«, *Radovi Filozofskog fakulteta u Zadru* 34, *Razdio povijesnih znanosti* 21, Zadar 1995., 163-184.
- WEILL-PAROT Nicolas, »La rationalité médicale à l'épreuve de la peste : médecine, astrologie et magie (1348-1500)«, *Médiévales* 46 (2004), 73-88, <http://medievales.revues.org/document884.html>.

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