Urban extent of the epidemics: reflections on towns and plagues in Europe in the 19th century

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The essay analyses the effects of diseases and epidemics when dealing with the perception of urban spaces in the contemporary age. The main purpose is to look at the relationship between towns and diseases from a historical perspective within the European geographical space and reflect on the changes that epidemics have been implied in the urban, social, and economic structure of the city over time. The essay analyses the strategies, methods, and practices carried out since the late 18th century to prevent and hinder epidemics through urban built environment configuration changes, uses, and planning. It also proposes a possible connection between the past, and sometimes conflicting experiences, and the processes and concepts raised during the ongoing Covid-19 pandemic.
Keywords: epidemics; urban transformations; historic recurrence

La dimensione urbana delle epidemie: riflessioni su città e malattie in Europa nel XIX secolo
Il saggio analizza gli effetti di epidemie e malattie nell'organizzazione e nell'uso degli spazi urbani in età contemporanea in ambito europeo. L'obiettivo è di indagare, in una prospettiva storica, la relazione tra città e malattie e riflettere sui cambiamenti che le epidemie hanno comportato nel tempo nei modi di percezione e fruizione della città. Il saggio indaga inoltre le resistenze al cambiamento che in molti casi hanno compromesso l'efficacia dei provvedimenti adottati, sottolineando quella propensione alla 'dimenticanza' che l'umanità sempre manifesta di fronte alle catastrofi. Il contributo analizza strategie, metodi e pratiche, talvolta rivoluzionari, posti in atto dal tardo Settecento per prevenire e contrastare il dilagare di epidemie e mali contagiosi, nonché gli esiti indotti, e propone una riflessione finale su similitudini e differenze tra le esperienze del passato e quanto sta accadendo nell'attuale stagione pandemica.
Parole chiave: epidemie; trasformazioni urbane; ricorrenza storica

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The link between the ravage of the coronavirus epidemic and the environmental issues, with a focus on urban and territorial governance, appears among the most debated arguments in the current health crisis, even though recent studies on ecological and medicine history show that every epidemic episode so far represented the occasion to focus the attention of administrators, planners, politicians, economists, experts in medicine and hygiene on such arguments. The topic has been recurring since the Middle Age, even if with different perspectives and impacts. Empiric strategies to hinder, but also to prevent infection, were practiced over time, as the urban built environment and the population health are «intrinsically linked» (Lai *et. al.*, 2020: 27). In this sense, the transformation of the urban fabric and the attempt to change sanitary behaviours weaved each other, conditioning the change in the towns' structure in pre-industrial and modern era. Moreover, with the increased interest in the role played by the environment within the health and social wellbeing, the architecture and landscape gradually became places of prevention, containment, and mitigation of the disease. Starting from these premises, the essay will look at the effects of epidemics and related preventive sanitary measures in European cities with a particular focus on the 18th and 19th centuries, which are considered the shifting moment of all approached arguments in a matter of scale and impact. The proposed reflection is accomplished through a screening of the most recent studies in the field of medical, urban, and environmental history. It does not represent an exhaustive study rather an attempt to connect the past with current issues of relevance for the pandemic situation such as the risk perception of the built environment, recurrent sanitary habits, authority, the role of science within the public sphere, cliché in connection with disease transmission, and its impact on urban transformation, inequalities, mobility, and scale.

Urban topography of insalubrity

Town salubrity has always been particularly under discussion during epidemics. The debate that has always involved experts in many fields seems to focus on the complex relationship between man and his surrounding environment. It is surprising that whenever an epidemic event happens, one acts as the problem would be faced for the first time; thus, the idea of salubrity, its perception, and management seem to be relatively new topics to tackle. As happens for any catastrophic event, humanity shows a very short

memory of the fact, and it is tough to analyse the phenomenon from the proper historical and economic perspective.

Recent studies on environmental history focused on strategies and failures in the management of epidemics and urban salubrity in the past (Sansa, 2006; Sori, 2001; Cipolla, 1989; Corbin, 1983),[1] and a general overview of this research is helpful to trace a 'map of insalubrity' in the 19th century European town. Interesting differences and similarities with the current situation emerge especially considering the control of the emergency and risk perception, starting from commonplaces and stereotypes.

There are many clichés on insalubrity of pre-industrial towns in the studies of urban history. In general, the idea that real efforts to solve towns' un-healthiness have been practiced only from the 19th century, during the well-known process of urban space medicalization, is largely shared. The relationship between garbage and air decay, for example, guided the ideas that voyagers developed on the European towns in the age of the Grand Tour, so that some historiographic *topoi*, indeed strongly influenced by politics and ideologic commonplaces, had been consolidated overtime on the tidiness and salubrity of towns and countries (Sansa, 2006b: 86). Otherwise, some interesting practices and actions promoted in the pre-industrial towns are documented to solve the issue of insalubrity and the related possible diseases. In Great Britain, for example, since the Middle Age jurisprudence dealt with the topic of town salubrity (Jenner, 2006: 51). The idea of *nuisance* in some way ruled the urban topography of the English pre-industrial towns: what happened in beer factories or slaughterhouses was intolerable in alleys and widenings close to the dwellings. At the same time, stables and factories could be annoying in a residential area, but not in a peripheral one. Consequently, the idea of *nuisance* was related to the dignity of a given area, and this generated tangible hierarchies and inequalities with implications in the drafting of the urban map of unsanitary conditions.

Until the second half of the 19th century, the miasma theory based on the idea that stench and infections perfectly corresponded (Bargelli, 2016: 14) influenced the perception of risks by inhabitants and the organization of the town: «for a long time, the olfactory perception acted as an important criterion to rule urban spaces. Smelly activities and persons were taken under control and, if possible, they were marginalized from the rest of the society. According to the miasma theory, bad smells were considered one of the main causes for the spreading of diseases» (Sansa, 2006a: 12). Sanitary and environmental prevention coincided in the end as the main action for defeating epidemics was the elimination of miasma and the related causes (Sansa, 2006b: 88). Looking at the matter from a historical perspective, miasma and insalubrity defined specific urban hierarchies in the European pre-industrial town according to the shared impression that bad smells matched with the idea of poverty (Henderson, 2006: 18). Residential areas close to slaughterhouses, dye-works, tanneries, cemeteries, and prisons were considered at high risk for epidemics, and bad smells circumscribed the areas characterized by low economic values (Xico Costa, 2006: 148).

Opposite to the miasma theory, bacteriology changed the idea of the healthy city in the second half of the 19th century. An invisible enemy, the bacteria, introduces a new risk that was not only invisible but also odourless. From this moment on, the problem was not defeating bad smells, but checking the quality of waters, assuring proper ventilation to help germs dispersion, and taking advantage of the antiseptic effects of sunlight. If in the 18th century town (the industrial town) the salubrity was assured by removing the miasma, in the 19th century town (the functional town) sunlight, clean water, and fresh air were seen as the best solution (Xico Costa, 2006: 150; Collins, 2020). Despite geographic and cultural differences, the European sanitary engineering at the end of the 19th century, manages to draft a common map and planning habits as concerning the medium and large urban settlements' transformations in response to threats posed to health and sanitary security. City walls, narrow alleys, and lack of open spaces in the core of the old town were the enemies to defeat, along with the areas where the population was highly amassed. Studies in urban histories had demonstrated over time the extent to which the medicalization of urban spaces claimed by doctors, politicians, and economists, had been used not only to renovate the ancient, unfunctional, and unfashionable cores of the towns but also for political and ideological purposes. The reorganization of overcrowded areas where dirtiness prevailed and social disorders could occur, was one of the primary purposes of planners, sanitary engineers, and local administrators. But historians also highlight that the insalubrity in the industrial and the post-industrial town not only depended on increasing population and urban density but also on the civic sense of the communities, on the lack of sanitary culture, on the economic fortune or misfortune of that specific city, on the change of costumes and political tendencies (Jenner, 2006: 63).

In many cases, once demolished the defensive walls, suburbs became receptacles of whatever was unwanted in the core of the town in a matter of functions and built spaces such as e.g., hospitals, cemeteries, lazarettos, and factories (Zocchi, 2006: 292), including new residential areas for the working class built in the proximity of the industrial sites. Sometimes, the result was a simple move of 'unhealthy' areas and quarters, and consequently of 'unhealthy' populations from the city centre to the suburbs. After all, healthy towns and industrial towns were not antithetic in the 19th century (Parisi, 2001: 54); hence hierarchies and subalternities defined both the industrial and post-industrial cities.

The analyses of insalubrity by doctors and experts in hygiene from which the regulations for urban transformations were derived, was mainly based on the description of the phenomenon (the physical decay of the dirty areas of the town) without considering the reasons for insalubrity which mainly depended on the behaviours of the inhabitants. The analyses of symptoms were carried out disregarding the etiology or, in other words, what Michel Focault called «the clinic of symptoms» (Focault, 2003: 134; Xico Costa, 2006: 146). For example, the rate of mortality in the most degraded parts of towns did not only depend on the terrible conditions of the houses, but also on deep-rooted habits, such as unsuitable body care and protection, and inappropriate nutrition (N.d.R., 1941: 29). Moreover, aspects of the sanitary behaviour among the urban communities brings into attention another aspect of built environment governance in matter of healthiness which until the 19th century appeared mainly depended on the private initiatives e.g., cleaning of the street, draining cesspools, while its success was based on the awareness and responsibilities of the inhabitants, rooted in the development of neighbourliness and public spirit. With the introduction of the bacteriology, the variety of aspects to take under control for hindering epidemics increased: the quality of water, the reorganization of sewage systems, the

proper ventilation and insulation of urban spaces, in other words, the medicalization of urban spaces, implied the public control of health (and society). Apart from some specific experiences, such as the case of Milan in Italian setting of the late 19th century,[2] in general, the passage from private to public management of town salubrity was not so successful (Sansa, 2006b: 103).

The health of working and disadvantaged social groups mainly depended on public initiatives that, however, significantly reduced their efficiency during the emergency.[3] On the contrary, private initiatives from wealthy groups, addressed to improve the conditions of private and public spaces in the richest urban areas, have been documented. The consequences were not only in the unequal distribution of healthy spaces in the urban context, but also in the different perception of the risks, and consequently, the unfair distribution of mortality. Of course, the main negative effect was the significant rate of deceased among vulnerable people. For example, during World War One, it was observed that the rate of healthy recruitments occurred rather from the rural than urban environment both in British and German context stressing the fact that the problem was the city itself (Hall, 2014: 32-34). However, a secondary negative result is documented concerning the impact on the middle classes as the increase of working-class mortality inevitably affected their economies. «The horrors of the slums» as W.T. Stead states in 1884 indicates the housing issue as main responsible for the dreadfulness of the Victorian city and underlines the social, sanitary, and economic implication of the British middle-class that pushed towards state direct involvement in solving this issue (Hall, 2014: 15-19). Although in a very different contest, the debate on private or public control of urban spaces and healthiness is still noteworthy in relation to the current pandemic.

The strong interconnection between the economic, political, demographic, hygienic features, and, on the other hand, the social and anthropologic aspects, had been underestimated in the intense phase of urban space medicalization in the 19th century European cities. This is one of the reasons why the *sanitary* approach significantly changed the physical structure of urban spaces but was irrelevant concerning the social and ethnic revolution that was supposed to uphold (Parisi, 2001: 58).

Against the 'infinitive miseries': built spaces of health

At the beginning of the 20th century was published an interesting analysis of the main urban public works accomplished in Italy after the season of the choleric and tuberculosis epidemics (*Direzione generale della sanità pubblica,* 1908). The document is the representation of the *healthy* town as conceived by the so-called sanitary engineering: new roads and squares, new houses for the working class, new sewerages, new aqueducts, new public bathrooms, new markets, and slaughterhouses, but also cemeteries, hospitals, crematories, hygiene offices and laboratories, quarantine and disinfection stations. Another interesting result that emerges is the significant amount of funds invested in parks, gardens, and promenades built in the Italian towns after the dismantling of the city walls, sustained by the need to bring fresh air and exercise within the urban environment as social reform. Investing in the *public good* was considered as having direct consequences on individual health (Collins, 2020).

The many investigations on the hygienic and sanitary conditions in Italy at the end of the 19th century (Bocci, 2012: 19) clearly explain the significant variety of new spaces and buildings necessary to manage the emergency, to prevent further epidemics, but also to contrast the 'infinitive miseries' which have always accompanied the modern diseases (Ferrari, 1912: 5; Arcangeli, 1978: 88). The observed connection between pathologies, such as cholera and tuberculosis, and ways of living imposed a significant reflection on the inadequacy of the underground city e.g., aqueducts and sewerage, but also of the ways of living town's open and built spaces. In Naples, for example, moving factories in the periphery to restore decaying areas where housing and working promiscuously coexisted, inevitably destroyed the «economy of the alleys» (Petraccone, 1978: 212). Although one was perfectly aware of the opportunity to separate industries from residential areas, in many cases working class settlements had been built close to factories driven by the economic efficiency principles and thus generating dangerous environmental promiscuities. Not to mention unauthorized industrial settlements in the core of the towns: famous is the case of Naples, where dangerous activities were still commonly practiced in the historical city centre at the end of the 19th century (Petraccone, 1978: 210). Thus, it seems that the various epidemics crisis that spanned the 19th century were an opportunity and occasion to reevaluate the urban social relations established not only by economic, cultural, and political means, but also by the use of the urban built environment.

Hospitals changed their passive role from assistance and marginalization into a new active function related to diagnosis and care (Diani, 1980: 83). New specific typologies were also designed, such as sanatoria and dispensary for the care of tuberculosis, and asylums for the mentally ill. The therapeutic buildings' design initiated to be linked to the surrounding environment as it was directly involved in the treatment procedures through exposure to nature and fresh air, isolation, and recreation (Del Curto, 2010; Collins, 2020). Large, opened windows and doors that favored ventilation; verandas as an extension of the interiors oriented towards the natural landscape views; courtyards, and parks represent just some of the architectural features considered to improve the treatment itself, followed and sustained by the surrounding environment. This not only pushed towards the isolation of the care structure (e.g., sanatoriums and asylums), but it also contributed to the common perception and association of health with fresh air and landscape. There must be mentioned also the variety of seaside 'colonies' built along the Italian riviera, specially designed as a place for therapy for the ill and fragile children of the marginalized social classes (Segatin, 2017), or the variety of sanatoriums built in the proximity of the mining towns across the former Hapsburg Empire, destined to prevent and treat the pulmonary problems of the miners and their children.

Despite their notable impact on the health provided services, the sanatoriums stressed the urban disparities in matter of economic and social wellbeing, while isolating the disease and not necessary preventing it. For example, due to their high maintenance costs, some medical experts and researchers of the time such as Ernesto Bertarelli considered the structure available for the upper social classes as it was offering not only the clinical healing but also the economic one, while for the working-classes only occasionally conditioned by the possibility and probability of full physical recovery in view of regaining work accessibility (Arcangeli, 1978:

85-86). On the other hand, as concerning the working place, where the contagion and disease transmission was high, there are no general records concerning the change in sanitary behaviors. In some other cases, the role of these specialistic buildings sometimes went beyond the care of the hospitalized. In Milan, for example, the associations connected to dispensaries and the municipality activated an interesting campaign for disseminating in schools the hygienic rules to prevent the disease and increase the awareness on the risk of infection (Arcangeli, 1978: 88). The educational role in forming healthy habits and behavior appeared translated also in the change of planning and design of schools, especially the primary school if considered the Swiss and French setting of late 19th-early 20th century, where the educational building responded to the necessity of affronting tuberculosis epidemics without disrupting the educational flow, but rather reinforcing a behavior based on exercise, play, and education in the fresh air (Iliou, 2018; Di Nallo, Tostoes, 2016).

It is interesting to note how the schools considered as built space, educational social system, and, nonetheless, component part of the urban fabric, represent a recurrent theme of interest and debate in relation with various epidemics episodes, including the ongoing crisis. If at the beginning of the 20th century their role was reshaped in base of the health and sanitary behaviour education and dissemination, currently they became labels of the pandemic outbreak which pushed towards periodical shut-downs with drastic social, economic, and health effects on all urban communities (Thorell *et. al.*, 2021; Mascheroni *et. al.*, 2021). Moreover, the closing of the educational spaces postponed, if not blocked, the possibility of (re)introducing certain sanitary habits and behaviours towards disease prevention and containment.

(Un)changed health behaviours

Another important debate during the ongoing pandemic represents the connection between the people's mobility habits, means, and methods, and the spread of the virus SARS-CoV-2 pathogen, with direct implications and consequences on the development of the contagion map at regional, national, and even global level (Carteni, Di Francesco, Martino, 2020). The current digital tools, as mobile data tracking, allow fast and essential critical analysis that directly link the mobility to the pathogen's spread contributing to the regulation, coordinated at the international level, of people and goods. This sort of sustained effort can be elaborated at a certain distance from the first pathogen outbreak, and within a certain territory, after the first regulations for containing the virus were already implemented.[4] One such official measure in Italy, followed at the European level, targeted mobility control through towns, regions, and then national confinement. It brought into public attention sanitary measures rooted in the history of plagues such as the quarantine, its places of isolation and disinfection.

Looking back to the health history in the European setting, the quarantine both as a method and as a mean of controlling the disease appeared associated with the regulation of people and goods mobility since the Middle Ages, when in lack of drugs and advanced medical knowledge, seemed the only effective health measure (Conti, 2008). Based on intuition rather than scientific basis, and in direct connection with the miasma theory, in the 14th century under the threat of plague epidemics, the quarantine stations appeared in connection with the maritime transportation of goods and people.[5] By the early 18th century, when the system of the maritime quarantine diffused in the Mediterranean basin, the model founds its applicability also in-land, giving birth to the 'sanitary corridors' as health regulations along the negotiated political borders (Ardeleanu, 2021). Besides the idea of isolation and sanitization of goods and people, the maritime quarantine system also introduced the lazaretto (*lazzaretto*), either as temporary or permanent constructions designed to contain the ills. The lazaretto was directly associated with the concept of insalubrity and illness described as such in the so-called 'quarantine historical narratives' (Bezio, 2013), being the undesired place within the urban environment and therefore, isolated, controlled, fortified, and commonly perceived as being *the* contagion point.

During the 19th century, under the full effects of steam transportation on sea and land, together with the colonial and urban expansions, appears underlined the necessity to approach in a systematic and standardized matter the issue of mobility and disease transmission at a global level. While the maritime quarantine system was implemented from the Old World to the New Worlds e.g., the Americas, Oceania, Africa, and Asia, the main political powers initiated a series of sanitary conferences to establish a uniform quarantine policy.[6] The interesting aspect of the battle against cholera epidemics for example, is the scheme to keep transport running smoothly, while imposing differentiations between groups of travellers, splitting mobile people into risk and non-risk groups, with quarantine and isolation applied to some and not to all. This raises the issue of who could afford to 'keep distance' while traveling, stressing the recurrent matter of social inequalities projected from the urban built environment and the politics of differences from an international perspective (Huber, 2020). Furthermore, the quarantine stations and places in the 19th century help in narrating the global history as becoming those «spatial units that match together in a matter of resemblance of use, regulations, rituals, and perception, no matter the cultural and geographical setting, that remained recognizable» (Bashford, 2016: 3), bringing into attention the emigration issue followed by all other typologies of inequalities e.g., social, cultural, ethnic, and gender (Gushulak, MacPherson, 2010; Huber, 2020).

The quarantine appears as the first regulated health measure in medical history. It stresses the role played by the authority in controlling the mobility of people, goods, and information, and therefore, is largely associated with the power of the state over the individual (Harrison, 2016: 251) because quarantine regulations were sometimes implemented as pretexts of repressive measures, while the lack of a common and shared definition on the length of the quarantine biased the perception of utility and efficiency for both the travellers and resident population (Conti, 2008). Thus, rather than being perceived as an efficient medical tool in disease transmission, quarantine gradually became associated with authority and mobility control.

The quarantine was a recurrent sanitary praxis until early 20th century, diffused in various forms and implemented in equally various manners. It disappeared from the public attention mainly due to the progress of medicine sustained by the development of treatments and vaccines giving also «the false impression that the battle against infectious diseases could be considered won» (Conti, 2008: 455). However, the current pandemic situation stresses more than ever in history the importance of quarantine as a prevention measure within

the slowing-down process of contagion at a global level and the necessity in shifting perception of this sanitary habit forgotten in our recent history. It also brings into attention a new type of regulated quarantine linked to self-isolation within one's dwelling and therefore, pushing the reflection towards the recurrent issue of affordability and accessibility of housing and all its economic, urban, and social implications.

Reflections in the light of the Covid-19 pandemic

The social and economic consequences of the epidemics, with the increasing of poverty, and in some cases, segregation, and marginalization, were the occasion to rethink the roles of urban built environment within given communities, to design new architectures, and reconsider the entire social, economic, and organizational structure of urban settlements. This is possible only if one considers that whatever is the real or perceived reason of the epidemics – the miasma, the bacteria, or the virus – the risk management and prevention measures, care, and control always imply not only the medical but also demographic complications. In a certain way, the perception of the risks in the medicalized 19th century town seems to increase inequalities and differences between healthy and unhealthy spaces. The reasons are various and, in some cases, seem to be even similar to the current situation. As we have now been realizing, epidemics reveal the fragility of the involved society (Forti Messina, 1977: 4). Moreover, the difficult balance between social and economic aspects, which are often antithetical, must be considered. This is probably one of the reasons why mortality crisis and pandemics have been again under the attention of scholars in historic demography and historical economy after a period of light carelessness, but surely before the spreading of the Covid-19 epidemic (Alfani, Sansa, 2015: 9).

As always happens when one tries to look at contemporary phenomena from a historical perspective, a red thread can be traced to connect past and present experiences. It would be very difficult, at least impossible to define the topography of insalubrity in the European contemporary cities affected by the Covid-19 pandemic. However, in the urban dimension of the disease, some similarities with the past recur in relation to the perception of urban spaces, housing, social, and ethnic relationships. The crisis of the big town models and the rediscovering of small towns in the countryside in all European settings,[7] the economic emergency and increasing of inequalities, the inefficacy of preventive measures, the divergence of opinions on the therapeutic methods, the mistrusts of politicians, and institutions in the management of the emergency are some of the similarities that characterized past and present society during epidemics.

Despite the immense progress of medicine in the last two centuries, today like yesterday, epidemics stress the economic and social vulnerability of the cities offering once again the opportunity to re-evaluate the fragile connection between health and built environment especially in the idea of the non-pharmaceutical interventions related to use, design and planning of urban spaces, which can play a key role in the prevention and management of such events (Lai *et. al.*, 2020). As we are facing a new century of pandemic crisis (Conti, 2008), that different from the past will be manifested at a completely different *scale*, either as a global perspective due to the borders' porosity and increased mobility of goods and persons, either as a scale of impact in *time*, it becomes imperative the knowledge and understanding of past responses' impacts through a systematically cross-disciplinary analysis of the overall economic, political, social and cultural circumstances. But in order to achieve this, it is needed a massive digitalization of studies connected with past epidemic and pandemic events (e.g., demographic history, economic history, health and environmental studies, medical studies, and urban studies), which could provide a more global critical approach in matter of direct responses and their impact on our cities and societies.

If such initiatives occurred recently with a specific punctual interest, such in the case of the historical micro-demographic database created for the critical analyse of plaque epidemics impact on Nonantola (Modena) (Alfani, Sansa, 2015), the current digital tools could provide the support and means in expanding the issue at global scale. The passage towards a global archive of past epidemic events, together with ongoing initiatives in networking the inter-disciplinary projects focus on the current health crisis,[8] could represent a step forward towards future health crisis mitigation.

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Notes

1. See the interesting volume edited by Renato Sansa (Sansa, 2006) which gathers essays by urban and environmental historians from many parts of Europe.
2. In Milan, for example, epidemics had been important tests to assess the capacity of the municipality to face the emergency with significant results in the 19th century (Zocchi, 2006: 19). If we compare the capability of Milan Municipality in facing the emergency of epidemics at that age and the current situation during the Covid-19 pandemic the results seem to be quite the opposite.
3. During the epidemics, for example, maintenance of sewers and cesspools used to decrease instead of improving, as well as the public system of garbage gathering (Xico Costa, 2006: 156).
4. The first institutionalized sanitary measures at regional and national level in Italy were implemented at the beginning of March 2020, while among the first analysis directly connecting the spread of the contagion with the people's mobility appeared in May/June 2020. See Elsevier Public Health Emergency Collection – Open Access.
5. The first regulated quarantines by local authorities appeared in major port-cities such as Venice or Ragusa (Dubrovnik), which were constrained to maintain their geographic, economic, and politic sphere of influence while concerning for the well-being of local communities. Throughout medieval and early modern years, the quarantine system spread to the entire Mediterranean basin in ports such as Naples, Genoa, Marseilles, or Malta just to name a few, where each local authority defined its own rules and regulation in matter of quarantine's duration, means and purpose based also on the health information concerning the departure/transit ports of the ships (Conti, 2008; Bashford, 2016).
6. The International Sanitary Conferences initiated in the 1850s in Paris, and further developed at Constantinople (1866), Vienna (1874), Rome (1885), USA (1881), and Dresden (1893), were designed to deal with the problem of cholera dissemination due to the impact that the steam transportation had on the global opening to mass-movements, migration, and therefore, global dissemination of diseases (Svitlana, 2020).
7. In the past, countryside was opposed to urban settlements as model of tidiness and purity (Sansa 2006b: 86).

8. World Pandemic Research Network represents an online platform where researchers from all areas of expertise and backgrounds working on the human, economic, and societal impacts of Covid-19 can subscribe their ongoing projects, with the main purpose in sharing and disseminating insights and results, in view of future disease mitigation. https://wprn.org/ (access: 2021.06.28).

References

Arcangeli G., 1978, «Diffusione della tubercolosi ed azione del Comune di Milano». *Storia urbana*, II, 4: 81-102.

Alfani G., Sansa, R., 2015, «Il ritorno della peste? Un'introduzione alla bibliografia recente». *Popolazione e Storia*, 2: 9-19.

Ardelean C., 2021, *O croazieră între Viena şi Istanbul. Călători, spaţii, imagini (1830–1860)*. Bucharest: Humanitas.

Bargelli C., 2016, «Di tristi odor ferace… Mendicità, igiene sociale e sordide manifatture nella Parma settecentesca». *Storia urbana*, 152-153: 5-36.

Bashford A., 2016, ed., *Quarantine. Local & Global Histories*. London: Palgrave.

Bezio K., 2013, «The Nineteenth-Century Quarantine Narrative», *Literature and Medicine*, 31, 1: 63-90.

Bocci M., 2012, «Tra emergenze sanitarie e crisi finanziaria: l'inchiesta del Ministero dell'Interno sui risanamenti urbani (1885-1905)», Teodori M., Vaccaro R., (eds.), *Studi in onore di Angela Maria Bocci Girelli*. Milano: FrancoAngeli, 13-27.

Carteni A., Di Francesco L., Martino M., 2020, «How mobility habits influenced the spread of the Covid-19 pandemic: Results from the Italian case study». *Science of the Total Environment*, 741, Open Access. Doi: 10.1016/j.scitotenv.2020.140489.

Cipolla C.M., 1989, *Miasmi e umori. Ecologia e condizioni sanitarie in Toscana nel Seicento*. Bologna: Il Mulino.

Clemens M.A., Ginn T., 2020, «Global Mobility and the Threat of Pandemics: Evidence from Three Centuries», *IZA DP No. 13947*, IZA Institute of Labor Economics – Discussion Paper Series.

Collins J., 2020, *The Architecture and Landscape of Health. A Historical Perspective on Therapeutic Places 1790-1940*. London-New York: Routledge.

Conti A.A., 2008, «Quarantine Through History». In: Heggenhougen H.K. (ed.), *International Encyclopedia of Public Health*, Academic Press, 454-462. Doi: 10.1016/B978-012373960-5.00380-4.

Corbin A., 1983, *Storia sociale degli odori. XVIII e XIX secolo*, Mondadori: Milano (or. ed., 1982, *Le miasme et la jonquille*. Paris: Montaigne).

Del Curto D., 2010, *Il sanatorio alpino. Architetture per la cura della tubercolosi dall'Europa alla Valtellina*. Roma: Aracne.

Diani M., 1980, «Antinomie e ambiguità nel controllo sociale: la medicalizzazione dello spazio urbano nel XIX secolo». *Storia urbana*, IV, 13: 77-88.

Di Nallo M., Tostões A., 2016, «From Playground to Recreation Centres for People of All Ages: Alfred Trachsel and the Case of Zurich», Conference proceedings *Adaptive Reuse. The Modern Movement towards the Future.* Lisbon, Portugal. 6-9 September.

Direzione generale della sanità pubblica, 1908, *Risanamenti urbani e miglioramenti edilizi e sanitari dal 1885 al 1905*. Roma: Tipografia nazionale di G. Bertero & C.

Ferrari P., 1912, *Il dispensario antitubercolare della città di Milano*, Milano.

Focault M., 2003, *The birth of the Clinic. An Archaeology of Medical Perception*. London: Taylor&Francis: (or. ed., 1963, *Naissance de la Clinique*, Presses Universitaires de France).

Forti Messina A., 1977, «Il Colera e le condizioni igienico sanitarie di Napoli nel 1836-37». *Storia urbana*, I, 3: 3-32.

Gushulak B.D., MacPherson D.W., 2010, «People, Borders, and Disease – Health Disparities in a Mobile World», *Infectious Disease Movement in a Borderless World: Workshop Summary*, Institute of Medicine – Forum on Microbial Threads. Washington D.C.: National Academies Press (US). Doi: 10.17226/12758

Hall P., 2014, *Cities of Tomorrow. An Intellectual History of Urban Planning and Design Since 1880,* fourth edition. West Sussex: Willey Blackwell.

Harrison M., 2016, «Afterword». In: Bashford A., ed., *Quarantine. Local & Global Histories*. London: Palgrave, 251-257.

Henderson J., 2006, «Epidemie, miasmi e il corpo dei poveri a Firenze nella prima età moderna». *Storia urbana*, 112: 17-36.

Huber V., 2020, « Pandemics and the politics of differences: rewriting the history of internationalism through nineteenth-century cholera». *Journal of Global History*, 15, 3: 394-407.

Iliou R., 2017, *Modernity and School Architecture (1870-1940). Origins and History of Primary Schools Built During the Thirties in Pari's Suburban Area*, PhD Thesis, Doctoare in Preservation of the Architectural Heritage, Politecnico di Milano.

Jackson P.S.B., 2012, «Fearing future epidemics: the cholera crisis of 1892». *Cultural Geographies*, 20, 1: 43-65. Doi: 10.1177/1474474012455017.

Jenner M.S.R., 2006, «Curare l'ambiente senza dottori? Igiene pubblica a Londra nella prima età moderna». *Storia urbana*, 112: 39-64.

Lai K.Y., Webster C., Kumari S., Sarkar C, 2020, «The nature of cities and the Covid-19 pandemic». *Current Opinion in Environmental Sustainability*, 46: 27-31.

Lilienfeld A.M., 1984, «Epidemiology and Health Policy: Some Historical Highlights». *Public Health Reports*, 99, 3: 237-241.

Mascheroni G., Saeed M., Valenza M., Cino D., Dreesen T., Zaffaroni L.G., Kardefelt Winther D., 2021, «Learning at a Distance: Children's remote learning experiences in Italy during the COVID-19 pandemic», *Innocenti Research Report,* UNICEF Office of Research - Innocenti, Florence

N.d.R, 1941, «Aspetti igienico-sociali del problema della casa». *Casabella-Costruzioni*, XIX, 162: 29-33.

Paliga E.R., 2020, «Quarantine as a tool of epidemic fight». *Przeglad Epidemiologiczny*, 74: 180-195. Doi: 10.32394/pe.74.15.

Parisi R., 2001, «Verso una città salubre. Lo spazio produttivo a Napoli tra storia e progetto», *Meridiana*, 42: 53-74.

Petraccone C., 1978, «Condizioni di vita delle classi popolari a Napoli dall'Unità al risanamento 1861-1885». *Storia urbana*, II, 4: 185-220.

Sansa R., 2002, «L'odore del contagio. Ambiente urbano e prevenzione delle epidemie nella prima età moderna». *Medicina & Storia*, II, 3: 83-108.

Sansa R., 2006, ed., «Curare le città: sanità e igiene a Firenze, Roma, Parigi, Londra, Barcellona», *Storia urbana*, 112, monographic issue.

Sansa R., 2006a, «I rifiuti e la storia ambientale: un'introduzione». *Storia urbana*, 112: 7-16.

Sansa R., 2006b, «Le norme decorose e il lavoro sporco. L'igiene urbana in tre capitali europee: Londra, Parigi, Roma tra XVI e XVIII secolo». *Storia urbana*, 112: 85-107.

Segatin F., 2017, *From Therapy to Holiday. Architecture of the Seaside Colonie for Childhood in the Italian Riviera*, PhD Thesis, Doctoare in Preservation of the Architectural Heritage, Politecnico di Milano.

Sori E., 2001, *La città e i rifiuti. Ecologia urbana dal Medioevo al primo Novecento*. Il Mulino: Bologna.

Svitlana H., 2020, «Legal regulation of sanitary affairs in Europe in the 19th century». *Law and Innovations*: 65-70. Doi: 10.37772/2518-1718-2020-1(29)-10.

Thorell L.B., Skoglund C., de la Peña A.G. *et al.*, 2021, «Parental experiences of homeschooling during the COVID-19 pandemic: differences between seven European countries and between children with and without mental health conditions». *Eur Child Adolesc Psychiatry*, Open Access. Doi: 10.1007/s00787-020-01706-1

Zocchi P., 2006, *Il comune e la salute. Amministrazione municipale e igiene pubblica a Milano (1814-1859)*. Milano: FrancoAngeli.

Xico Costa F., 2006, «La regolazione delle acque luride, Barcellona, 1849-1917». *Storia urbana*, 112: 141-165.