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URBAN HYGIENE AND SLUM CLEARANCE AS CATALYSTS

The Emergence of the Sanitary City and Town Planning

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In coping with the problems of urbanization processes of the 19th century, the scientific discipline of town planning evolved in third part of the 19th century (Cherry 1974; Albers 1975; Ashworth 1981; Schubert 1997; Lampugnani *et al.* 2017). The following is an analysis of how, when and by whom the questions of urban hygiene and slum clearance and urban redevelopment have been discussed in this context before the discipline town planning had been established. I will concentrate on Great Britain and Germany, using some examples from London and Hamburg, and on the time phase beginning in the mid-19th century and ending with the First World War. Focusing on “only” two countries is certainly problematic because the context of discussion in other countries and at the international level can hardly be disregarded (Albers 1997; Ward 2000: 44). However, the fact that England and Germany played the leading roles in the formation of the discipline of town planning can perhaps legitimize the limited scope (Calabi 1979). In England, the phase of most intense urban development took place between 1820 and 1830. Germany only reached this stage about 50 years later, between 1871 and 1900 (Pfeil 1972: 116; Sutcliffe 1983). But for both urbanization implied completely changing spatial patterns, leading to complex new problems in the cities.

Urban hygiene should become a Janus-headed companion of urbanization (Vögele 2001). As early as the 1840s, studies on housing, living conditions and the state of health in cities had been carried out under Edwin Chadwick (Finer 1952: 35). His utilitarian approach was based on cleanliness and morality to be striven for as a norm of behavior. He ‘was concerned to strengthen social discipline, to cut the redistribution of wealth to the non-working population and to enlarge the national economy by forcing the poor to work in it’ (Smith 1990: 350). With a mixture of fear, hope and pride medical professionals tried to analyze the dangers and develop solutions. The biggest problem turned out to be the uncontrolled discharge of feces into rivers from which drinking water was also obtained. The construction of the sewer system in London under Joseph Bazalgette (Figure 1.2.1; Halliday 2001) and in Hamburg based on the English model by William Lindley since the 1840s was unprecedented engineering achievements (Schubert 2008: 95). All urban problems seemed to be solved through engineering innovations.

High residential density, dirt, unclear water, poor nutrition and drinking addiction were spatially clustered, but indebted individually, consequently dirt is immoral while cleanliness is moral. The quantitative process of increased population density in urban areas was in the

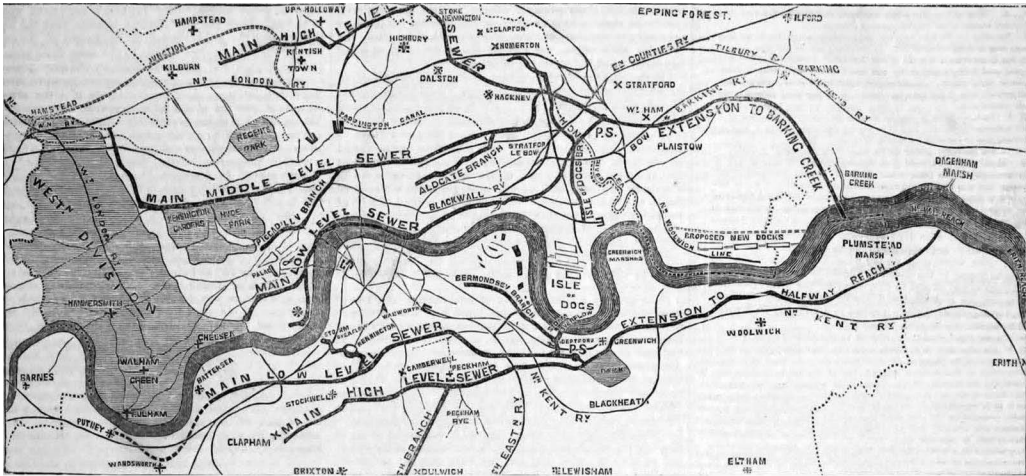


FIGURE 1.2.1 Main sewer system for London planned by Sir Joseph Bazalgette 1858.

Source: <https://www.google.com/search?q=bazalgette+main+Drainage+London&tbm=isch&ved=2ahUKewjlltrbp7PpAhVJiqQKHfrcC5YQ2->

following decades coupled with qualitative change in urban lifestyle, connected to modernization processes such as the formation of the class system, increasing bureaucratization and participation, the growing significance of law and the expansion of mass-communication (Reulecke 1985: 13). A study by the American Adna Ferrin Weber (1899) provided an impressive piece of evidence of the advanced international state of city studies at the turn of the century. The empirical study of cities, urban hygiene, housing conditions and slums, especially in Great Britain, marked by a systematic description of social realities with its manifestations of poverty, slum misery and lack of affordable housing, as for example by Charles Booth (1902) and B. Seeborn Rowntree (1901), quantified the problem. At its roots lay not the attempt to universally and theoretically penetrate the problem, which was the case in continental city studies, but instead to offer analyses of reality to master reality that is the pragmatic concept of English city studies (Pfeil 1972: 96).

Philanthropists such as Rowntree and the Lever Dynasty, who sponsored the first Chair in Town Planning in Liverpool later in 1909, were members of the *Eugenic Society* and other institutions that were ultimately concerned with interdependencies of health, economic effectiveness and productivity (Jones 1986: 51). Similar institutions and associations started with different focuses on the various problems and tried to implement improvements in both countries (Kieß 1991). *The Home Colonisation Society* was founded in England in 1887 and in Germany the *Society for Promotion of Inner-colonisation* was founded in 1912. The *Federation of German Land Reformers* (BDB – Bund Deutscher Bodenreformer) constituted itself in 1898. In the beginning, the theories of Henry George formed the leading principles of policy, later, Adolf Damaschke gained increasing influence. In England the *Land Nationalisation Society* (LNS) constituted itself in 1890, under the formative influence of Henry George and John Stewart Mill. The *National Housing Reform Council* (NHRC) was founded in 1900. Its German counterpart was the *German Society for Housing Reform* (formerly *Society for a National Housing Act*), founded in 1898.

With a spatial decentralization concept, other reformers were looking to solve the problems in an indirectly way by spatial relocating. In 1899, the *Garden City Association* was founded in England and three years later, in 1902, the *German Garden City Society* (Deutsche Gartenstadtgesellschaft) formed. The garden city idea must be recognized as one of the most important

reform concepts of the late 19th century (Ward 1992). It emerged against the background of housing problems in London and was to be promoted from the onset as an international model for decentralisation and healthy living and housing conditions. This established an interpretative sovereignty and definatory power that is reproduced until now with positive and life reformatory connotations. The fact that a German by the name of Theodor Fritsch (1896) had already developed the same concept a year earlier – albeit one that was saturated with reactionary folk ideology – is ignored in the praise of Howard’s idea, which is repeated like a mantra to this day (Schubert 2004: 9). But there was no dissent between conservatives and reformers, medical professionals, engineers and architects that the big city was unnatural, inherently unhealthy and unmoral.

Urban Hygiene as a Catalyst for Control and Reforms

This assessment suggested setting up institutions with a special focus on hygienic questions in both countries. In Germany the *Verein für öffentliche Gesundheitspflege* (Association for Public Health Care) (founded in 1869) and the “German Quarterly Journal for Public Health Care”, as well as the *Royal Sanitary Institute* and the “Journal of the Royal Sanitary Institute” in Britain must be mentioned. Technical excursions and reports promoted immediately international exchange. Well-known town planners such as Joseph Stübben, Reinhard Baumeister and James Hobrecht were represented in these institutions and tried to bring in experiences and technical concepts of action.

Urban hygiene, infrastructure problems and accelerated growth of large cities as well as unregulated building and expansion were given more attention. Means of directing, controlling and regulating development were sought. One could smell the places of poverty and the locations of misery. The stench caused the impression of miasma, dangers and centers of infection. With the slums, the bourgeois public associated and registered dirt, moral damnation, drunkenness as well as an aimless, uncontrolled life and feared dangers. They saw their own lives in contrast to this image as clean, pure and orderly. Above all the increasing concentration of poverty in so called “slums” was seen as a side effect of urbanization processes and considered a new challenge (Wohl 1983). The first to seek out and describe the living conditions in these areas of poverty in the cities were engineers, architects, judges, journalists and medical professionals, but also philanthropically oriented entrepreneurs. The housing conditions received less attention than the behavior of the residents. Thus it follows that the first reformers concentrated on lowering mortality rates instead of improving poor housing conditions. According to this theory, public health conditions were the inducement for improvement measures. “Clear away the filth, clear away disease, clear away the paupers” (Gauldie 1974: 132) was the logical sequence of argumentation.

Also in the circles of cultural critics John Ruskin and William Morris’ in England there were many aversions to the big cities and the “masses” who lived there. Anti-urban solutions by relocation were offered as a means of escape from the housing problems and slum misery of big cities. Fears of “degeneration” and “physical inefficiency” of some of the inhabitants of the city formed the background of anti-urban movements. The discussions in England were supported also by social Darwinist and racist ideologies. The finding that a healthy population would not automatically come to being through natural selection and the struggle for existence could not be denied. This prompted arguments that increased state intervention must be organized to renew slum areas and improve living conditions there. All in all, though, the realistic and pragmatic opinions of the city prevailed in England (Lees 1985: 178). The problems of the city were seen as “unpleasant side-effects”; temporary phenomena that would “go away of their own accord” or be cured with appropriate treatment.

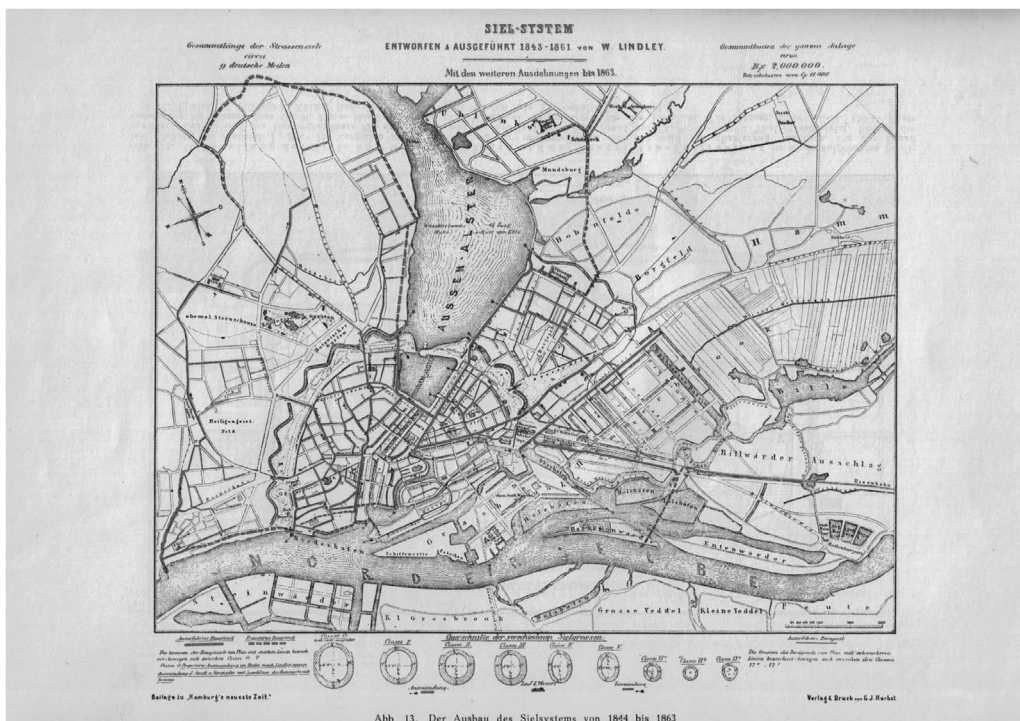


Abb 13. Der Ausbau des Siel-systems von 1844 bis 1863

FIGURE 1.2.2 Sewer system built in Hamburg proposed after the big fire in 1842 by English engineer William Lindley.

Source: Spörhase, R., *Der Bauverein Zu Hamburg*, Hamburg 1940.

Through improvements in the sewer systems, the invention of the water closet and the installation of all facilities necessary for a household in one self-contained housing unit, less and less space was required for domestic functions (Gleichmann 1985: 8). These new sanitary facilities were first used by the upper and middle classes and were only later introduced to working class households (Figure 1.2.2). To “heed nature’s call” in the privacy of one’s own home meant increased sensitivity, civilization or refinement of urban life. The required technology was available from the mid-19th century on, but mass distribution failed for one main reason: the lower class could not pay the rent for flats with water closets.

Two contradictory theories circulated in public health care until the end of the 19th century: the miasma and the contagion theories. According to the first, diseases were caused by dirt and miasma, and according to the second by pathogenic organisms and infection (Labisch 1992: 114). The modernized miasma theory became the main basis of the reform of public sanitary conditions particularly because, in contrast to the contagion theory, which enabled an action-oriented realization. The initiatives to improve public sanitary conditions were accompanied by a thrust of modernization and rationalization (Rodenstein 1988: 13), especially because health and environment were believed to be influenceable, planable and controllable. From repressive force to stimulating measures, discipline was carried out in the area of health behavior (Labisch 1992: 110). In England and Germany public health care, slightly different in each country, consisted of two contradictory elements. On the one hand was the positive, innovative element which had its roots in the area of scientific methodology and knowledge. On the other hand were those who saw public health as an instrument of power with social Darwinistic categories of inequality and degeneration (Rodriguez-Lores 1985: 27).

The results of urban hygiene could be directly drawn upon to deduce quantifiable urban development measures. If the “miasma” and “air that makes ill” could be avoided by improved ventilation than the logical deduction was a call for a loosening of the dense urban fabric. The physician Max von Pettenkofer, the German “hygiene pope” (Schott 2014: 240), had made the observation that a healthy person consumes five to six cubic meters of air in his sleep. If the person did not receive this amount of air his organism would be weakened and his susceptibility to diseases would increase. From these conclusions, minimal sizes for bedrooms and other such norms could be deduced. But as was later discovered, it was not the “miasma” that transmitted diseases such as Cholera, but rather the drinking water (Evans 1990). In the 19th century, over 10,000 were to die in London and over 8,000 in Hamburg. Since the theory of contagion through physical contacts, like the plague, was not resilient, dirt and the miasma (foul smells) were held responsible for the contagion and spread. Many scientists assumed that port cities were particularly vulnerable due to the wide range of migration movements (Schubert, Wagenaar and Hein 2021).

Uncertainty spread and unrest was feared. But the sanitary and housing standards in English and German cities improved absolutely and relatively for broad strata through improvements to drinking water supply and the construction of sewage systems starting in the 1850s. The mortality rate decreased and at the turn of the century urban areas had a lower mortality rate than rural areas. The new phenomenon of the metropolis had held its own and proven to be permanent. New approaches had been tested, rejected and in the end advanced to meet the challenge.

But the clenched housing problem of low-income groups still remained unsolved. The slowly developing field of town planning was based on unverified theories of scientific hygiene, and the call for better air supply to flats and legitimized controls of the “dangerous classes”. The ethical background was often pragmatic and reformist, aiming to improve urban conditions and to enhance the housing conditions of poor people.

In England and Germany the manifestation of a housing problem in the form of slums at the end of the 19th century was no novelty. What was new, though, was the extent and concentration of poverty that had resulted from industrialization processes, and how the problem was seen and approached. However, the physical characteristics of the slums and redevelopment areas are diverse in Germany and England. The dominant form of housing in Great Britain, even for lower income groups was the small, two storey terraced house (sometimes “back-to-back”), rented or rare owned, often in bad structural condition and overcrowded, whereas in Germany there were normally older buildings from the preindustrial area and later small, overcrowded rented flats (Tenements – “Mietskasernen”) showing a significantly higher density per flat as well as at the urban scale.

But the tenants of these new buildings, coming from the country, found it difficult to adjust to the standardized urban mode of behavior: “In their roughness they often smashed [...] everything that was not nailed down to get firewood; their dirty habits, their misuse of water-pipes, toilets etc. were only part of their mischief that made the life of the landlord hell”. There were often complaints that the rent was paid late (Figure 1.2.3). “The need for a decent, roomy, clean flat was overshadowed by the needs of the stomach” (Ruprecht 1884: 58).

Households with low incomes levels, often based on casual labor, were not able to raise the money to pay rent for even a small flat. The goal of the middle class offering “self-contained family housing” collided with the fact that the families could not afford it. Especially highly mobile workers, such as seasonal workers and workers with shifting schedules, were dependent on renting beds, parts of rooms or rooms and could not afford to rent self-contained flats. In general the moral appeals of the bourgeois reformers were not directed at the “lowest classes” but instead aimed at preventing the lower middle-class from sinking into poverty.

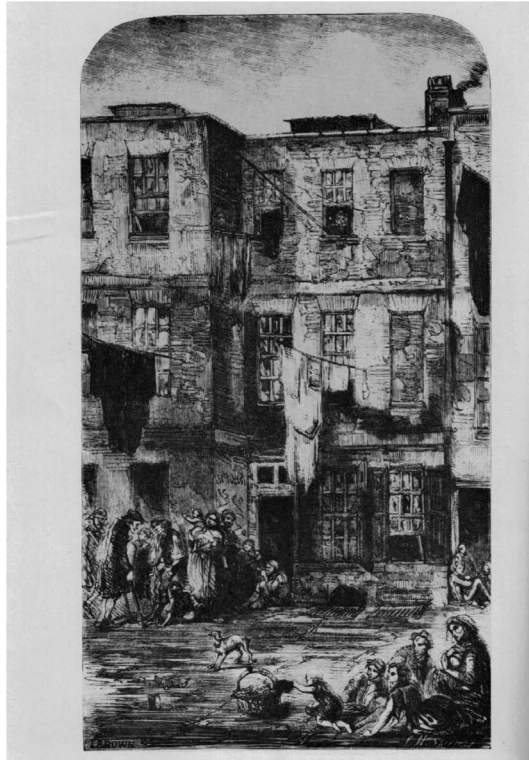


FIGURE 1.2.3 Unhealthy housing conditions of London's poor classes.

Source: Gauldie, Enid, *Cruel Habitations: A History of Working Class Housing 1780–1918*, London 1974.

Poverty, Housing, Slums and Town Planning

Poverty was considered as an individual failure in the 19th century. In slum clearance projects, hygiene was the grounds for a basic strategy of urban health carried out in the direct form of demolition. Besides representative redesign of city centers and the construction of a sewer system it was, above all, the clearance for new wider streets which determined planning and urban transformation. In general, the new streets were forged through the oldest, overpopulated quarters where mainly low-income groups lived. The goal of improving traffic collided with the shortage of cheap centrally located housing and was counterproductive to housing policy. Various types of activities were undertaken by the municipality, but fear and high costs of expropriation usually limited extensive acquisition of land so that improvements were in turn limited to the new street corridors. Beyond these newly built streets the poorer residential population had to move in closer together.

The causes leading to the phenomena of slums were seen in the behavior and bad character of the residents. The opponents of reform in England and in Germany propagated the “pigsty theory” which stated, “Give a pig a clean sty and he will soon turn it into a muddy, smelly den” (Gauldie 1974: 27). It was generally considered a fact that “the pig makes the sty and not the sty the pig”. But still the areas of concentrated poverty in the prospering metropolitan cities remained a problem that was difficult to understand (Sutcliffe 1985: 64). Until well into the mid-19th century the belief that poverty was a result of failing morality of the poor, and thus their own fault, was widely held. The residents of slums, the poor and the ill were no longer

considered the will of God, but rather the morally reprehensible dregs of a society that gave everyone equal opportunity.

Town planners' focus on urban expansion projects at the end of the century and their neglect of urban restructuring was understandable. After all, slum clearance came loaded with complicated questions of ownership and lengthy procedures which did not arise to such an extent in urban expansion. In England, there was a great amount of legislation dealing with the common lodging houses (Acts in 1851 and 1853), then with public health (1858, 1860, 1866, 1872, 1875) and finally with housing and, in parts slums (1868, 1875, 1879). With the establishing of the Royal Commission for Housing of the Working Classes and the Housing of the Working Classes Act in the mid-80s on there was a more effective national instrument in England which made it possible to work on larger neighborhoods with unhealthy living conditions. But possible uses of this national law were outweighed by local idleness. Nettlefold stated (1908: 1) that there had been 28 housing laws in England in the past half century, with the result: 'We have to-day comparatively few good houses and a mass of slums.'

In Germany, the block of interests of house and land owners, land speculators and banks and the electoral law prevented a housing law until 1918. The Reichstag referred to the diversity of circumstances and denied responsibility (Niethammer 1979: 375). Also there was no legislation on the national level for dealing with slums, but on the local level some cities (like Hamburg) carried out clearances and improvements. It became increasingly apparent that a shift in the status of inhabitants of the area was inherent to slum clearance that aimed at improving living conditions and part-state interventions, that did not question a privately organized housing market, became more accepted.

In England and Germany, two different urban redevelopment tasks had clearly evolved before the First World War and London and Hamburg became the leading cities.

- The first was aimed at "improving living conditions" through clearance of large areas and rebuilding, while retaining the function of housing. In London, it was the *Boundary Street* project, executed by the London County Council since 1896, where 1,044 new dwellings for about 5,700 people were built after demolishing all old structures. In Hamburg, it was the area of *Südliche Neustadt*, often flooded with insanitary housing conditions, where all old buildings were demolished and replaced by 4,500 new (more expensive) flats for about 21,000 people.
- The second aimed at changing the use of inner-city areas and achieved this by clearing away old buildings (mainly housing) and building anew, mainly for tertiary uses. In London in 1905, the *Kingsway* redevelopment project was started to create a better north south connection in the center and about 7,700 people had to be relocated from an area designated as a slum (Figure 1.2.5). In Hamburg, it was the clearing of an area called *Nördliche Altstadt*, which was combined with the construction of a subway and creating a better connection between the new railway station and the Town Hall including creating a modern CBD (Schubert 1997). With the clearing of all old buildings – where prostitution, crime and dissenting behavior have been complained ("Gängeviertel") – about 17,000 persons were forced to look for new accommodation.

The German Otto Schilling was one of the first to summarize the new phenomenon of the emergence of city centers in his work on the theme "inner urban expansion". "The old town remains the site of trade and becomes more of a commercial centre as the growing outer neighbourhoods expand. [...] This restructuring process is generally called the emergence of a city centre, after the typical example of the city centre of London. In London's city centre all roads

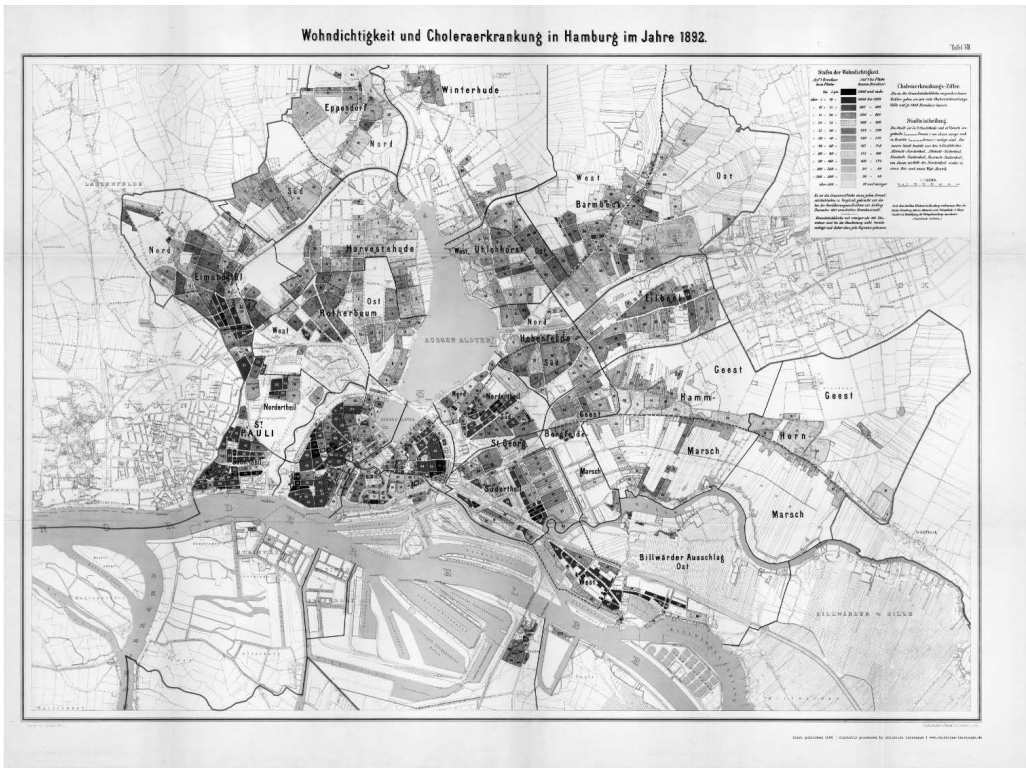


FIGURE 1.2.4 Cholera mortality in Hamburg after the epidemic in 1892, showing high percentages along the River Elbe.

Source: HafenCity University Hamburg, <http://gdi-hcu.local.hcuhh.de/>

cross, and not just those of the city of London or of all of England, but of much of the world’ (Schilling 1915:1). Immense costs and implementation problems caused the failure of many ambitious clearance projects in large areas (Figure 1.2.4). In England and Germany only few projects were carried out. “The activity of German cities will generally be limited to clearance of small areas for new streets for transportation and canalisation purposes as well as to level areas” wrote Josef Stübben (1890: 299). The phenomenon of emerging city centers was thus already identified and studied before the First World War. ‘City centre emergence means the conversion of the inner city from a housing area to a business area. [...]. ‘Agglomeration,’ and ‘accumulation,’ is not only apparent, but rather a distinct differentiation of the evolution of the metropolis within the city can be observed’ (Brix *et al.* 1918–1927, 514f). In “inner-urban expansion” displacement of inhabitants was, as a rule, not considered a problem (Schott 1912: 69). On the contrary, it was often even a declared goal. ‘The emergence of a city centre seems to be a necessary, or at least useful effect of urban agglomeration’ (Brix *et al.* 1918–1927: 520). Alternate housing, when it was even considered, was usually in another part of town and provided by the market.

Sanitation of Cities, Conditioning and Town Planning

Specialized new groups of speakers were formed who succeeded in becoming protagonists and leading experts for the new urban problems and their solutions. New administrative practice was established, technical and medical innovations became possible, and in the process of town

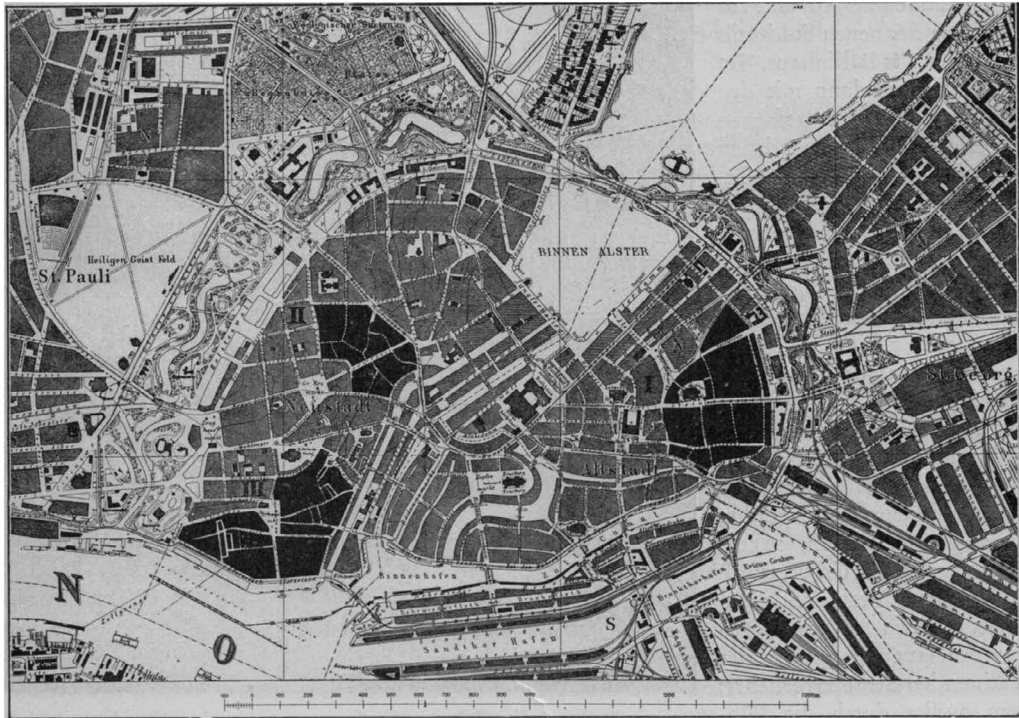


FIGURE 1.2.5 Slum clearance areas in Hamburg, identified after the Cholera epidemic in 1892.

Source: Schubert (1997), *Stadterneuerung in Hamburg und London. Eine Stadtbaugeschichte zwischen Modernisierung und Disziplinierung*, Braunschweig Wiesbaden (Vieweg & Sohn).

planning becoming a profession, scientific and engineering experts became separated from laymen. Besides addressing the aspect of hygiene the first textbooks on town planning mainly concentrated on the technical, economic and legal aspects of town planning. The specialist hygienists provided the statistical data, while the town planners “only” could argue with creative options for action. With regard to the belief in science in society, town planning – referred to work to implement the medically proven findings. Medical narratives of order and disorder, planned and unplanned, healthy and sick, found their way into urban development. It is no coincidence that the concept of renovation (“Sanierung”) comes from medicine and the German concept of urban health (“Stadtgesundheit”) is also borrowed from medicine.

At the beginning of the 20th century, new paradigms belonged to the urban hygiene debate. Military suitability and performance of the race became criteria that were measurable. The urban way of life with its outgrowths, the slums, was classified as the cause of degeneration. Inferiority would question the efficiency of the race and the nation.

It is often overlooked that racial hygiene ideas have also been developed in England in connection with the housing question and slum restoration. As long as it was assumed that the slum dwellers were a ‘low race’ who passed on their ‘inferior genome’, eugenic measures had to be a perspective of ‘population improvement’. (Davis 1906: 255) Francis Galton in particular had coined the term eugenics and the ‘Eugenics Society’ had requested racial hygiene measures. Galton dealt with the question: ‘How can you breed a human race that best corresponds to our ideals?’ (1910: VI).

Social contexts were interpreted by a biological school of sociology, which also partly adopted the conceptual apparatus of biology, as organisms (society) with different cells (people) and cell

structures. The theories of English thinkers, Malthus' population law and Darwin's struggle for existence were especially transferred to social phenomena by Herbert Spencer and were very well received in Germany. 'In further pursuit of the suggestions made by Darwin, Spencer, Wallace and others, the view is taken here that the selection which takes place in the struggle for existence maintains the physical fitness of the "race", but on the other hand, degeneracy would inevitably occur if our culture was caused by a year-to-year care for inferior individuals would get these weaklings of society without correcting this malaise through a conscious and scheduled selection' the German hygiene specialist Alfred Grotjahn wrote (1904: 734). Here they underwent a reinterpretation from the aspect of inheritance and natural selection, which examined urbanization processes primarily from the aspect of racial selection. Social hygiene measures would counteract the degeneration of people (Weyhl 1904: VI). Since the 'inferior' population grew above all in the slums, this line of argument also implied a reversal of the previous slum remediation policy.

The hygienically based reasoning should not remain insignificant for the recovery of the cities, it should serve as scientific evidence for the need to demolish or renovate backward slums. In the absence of reliable data on building and apartment stocks, "exact" data from the hygienists was gladly used to enforce the quantified requirements of light and air by means of "apartment maintenance" and controls. In Germany Alfred Ploetz lectured in 1911 on the goals of racial hygiene and 'optimal maintenance and perfection of the human race'. It must be about "favoring the multi-child families of proficient individuals" and "creating obstacles to the reproduction of inferior people" (Ploetz 1911: 167). The ideas of racial hygiene and eugenics were to be put into practice by the National Socialists after 1933. Ploetz, to name just one of the pioneers of eugenics, justified Hitler's seizure of power and now saw options for transferring racial hygiene to the broad field of practice. These 'dark' side of the consequences of planning with 'final solutions' should not be ignored.

The discipline of town planning – emerging in the last third of the 19th century – had to dock with other disciplines and selectively transfer knowledge and integrate it into projects of spatial planning and order. In addition to architectural and design concepts and engineering developments, it made sense to fall back on the already established science of medicine and hygiene. The uncritical transfer of "facts" from urban hygiene was seamlessly translated into normative concepts of town planning. The boundaries between housing reform approaches and ideas of 'healthy living' and urban hygiene were blurred. Conceptions of urban hygiene "from above" implied conditioning and discipline and transformed external into internal constraints.

Planning history should contribute to the questioning of "secured" knowledge from other disciplines (Hein 2018). Knowledge stocks from other disciplines are to be contextualized in the social and political context before they are taken over without reflection. The history of urban planning offers sufficient examples on the basis of which this – as in the example of urban hygiene – can be documented.

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