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#### **Abstract**

James Hobrecht (1825–1902) was a Prussian planner responsible for the 1862 development plan for the expanding city of Berlin and later for its new sewerage system. The "Hobrecht Plan" was based on a concept of large city blocks, which, combined with unleashed land speculation and the building regulations of the time, gave birth to an extremely dense, socially and functionally mixed city of often appalling living conditions. The sewerage system, on the other hand, was an innovative answer to the needs of the growing metropolis

**Keywords:** housing; law; legislation; modernization; public health; regulations

]fo[James Friedrich Ludolf Hobrecht was born in 1825 in Memel (present-day Klaipeda in Lithuania), but soon moved with his family to Königsberg (Kaliningrad), where he trained in geodesy, and later to Berlin, where he graduated as a building engineer (Baumeister) in 1856. After working for two years on the construction of the Frankfurt/Oder-Küstrin (presentday Kostrzyn in Poland) train line, he became head of the planning department at the Berlin Police Headquarters (at that time in charge of building and planning), where until 1861 he was responsible for designing a "development plan for Berlin's surroundings." In 1960 he travelled to Hamburg, Paris, and London to study their urban sewerage systems before moving to Stettin (present-day Szczecin in Poland), where he designed the new water utilities. In 1869 he returned to Berlin, where he soon became responsible for building the new sewerage system, which was completed by 1894. He undertook travels to Tokyo, Cairo, and Alexandria. Hobrecht's contribution to planning was on the one hand his development plan for the rapidly growing late nineteenth-century Berlin and on the other the complete modernization of the city's sewerage system. Later commentators criticized him for his alleged responsibility in creating favorable circumstances for the extremely high density and inhuman living conditions that became the norm among the urban poor in Berlin in the last decades of the nineteenth century and the years leading up to World War I.

#### ]a[Contribution

]fo[By the year 1861, when Hobrecht became responsible for Berlin's new development plan, Berlin, the capital of Prussia, had reached a population of half a million, doubling in only 20 years (less than 250,000 in 1831). It was to double again in the following 20 years, surpassing the million by 1881 to finally reach 2 million at the start of World War I in 1914 (Ulrich, Prell, and Werner 1992). This influx of population put an enormous strain on both housing and urban infrastructure, which did not have the capacity to service the rapidly growing metropolis. Extremely high population density led to appalling living conditions: Several families shared a home, several persons a room, a high percentage of the population lived in basements unsuitable for dwelling, while sewerage was limited to gutters in the middle of the street (Peters 1995). Building and planning at the time were the responsibility of the police, and by the mid-nineteenth century planning was reduced to a balance of interests between public traffic needs and the interests of a young but growing capitalist class of land owners and property developers (Geist and Kürvers 1984, 480). The Berlin city council overwhelmingly represented landlords' interests, as owning land or a business inside the city walls, in addition to having a relatively high yearly income, were preconditions for having a seat on the council. Land owners had little interest in resolving the persisting housing shortage, which led to constant delays in the designation of additional areas for the construction of much-needed new housing (Strohmeyer 2000).

As head of the planning department at the Berlin Police Headquarters from 1859 on, Hobrecht undertook the design of a "development plan for Berlin's surroundings," which was completed and finally officially accepted in 1862. Today known simply as the "Hobrecht Plan," it was the first complete street plan for an expansion of the built-up area inside the municipal borders. Its main goal was to provide a street pattern for predominantly agricultural areas around the existing city that were to be designated for construction, providing housing for Berlin's exploding population. The plan did not modify the city (and is consequently a completely different type of urban intervention than the one undertaken by Baron Haussmann in Paris), but added an abstract system of repeatable patterns of squares, streets, and city blocks around the existing core. Two main ring roads enclosed the urban area, including the then still separate town of Charlottenburg. Arterial roads designed to take the increasing traffic cut through fields still used for agricultural. The prevailing street plan was radial, with roads spreading in all directions from several focal points. Such points were mostly squares, equally distributed across the urban area, producing several subcenters instead of one single core one. The wide streets defined deep city blocks, a pattern that, combined with the limited building regulations of the time, produced very dense, tenement-like housing complexes known thereafter as *Mietskasernen* ("rental barracks")

In 1873, after his successful planning of the water utilities in Stettin/Szczecin (1862–1869), Hobrecht became head engineer for the building of the new Berlin sewerage system. Berlin was divided into 12 independent drainage areas (which he called radial systems), with pumping stations that led drainage flows through stone canals toward the periphery. There, pressure pipes directed them to sewage farms where they were ultimately used as agricultural fertilizers. The system's capacity was such that it was able to support Berlin's last large-scale extension of 1920, when, after the incorporation of several independent towns and villages, the city reached a population of almost 4 million.

# la[Legacy and controversy

Ifo[Hobrecht's 1862 street plan for Berlin gave birth to large tenement complexes, known as Mietskasernen because of their uniformity and the reduction of their inhabitants to very basic living standards. Space for Hobrecht was a blank canvas, upon which an abstract street pattern with repeatable city elements, the city blocks, could be superimposed. Such city blocks, with their social and functional complexity, were small closed worlds in themselves: or, as architectural critic Dieter Hoffmann-Axthelm notes, "every city block comprises in itself the whole complexity of the city" (Hoffmann-Axthelm 1993, 194). The deep city blocks as defined by the plan, in combination with the existing building regulations, created a particular building pattern with a main building toward the street and one or several buildings parallel or perpendicular to the first one, divided by internal courtyards. Among the few limitations in place were a minimum width of 5.34 m for courtyards and an eaves height of 22 m, both imposed by the police and linked to the capacities of fire engines. Land owners pushed for the maximal possible land use, often contributing to disastrous living conditions. Although not directly responsible for the final result, Hobrecht ignored the consequences of what his plan would produce in the context of the existing building regulations and growing land speculation.

The earliest line of criticism (see for example Bruch 1870) came from a new liberal ideology, which would rather see urban development in the hands of the up-and-coming bourgeoisie instead of central planning, at the time in the hands of king and police. Werner Hegemann, arguably Hobrecht's fiercest critic, writing in 1930 calls the tenements "prisons" and "crime against Berlin's population" (Hegemann 1930/1976, 232). Other, later authors are less harsh in their judgment: Harald Bodenschatz, for example, sees in land speculation the main cause for the birth of the *Mietskaserne*, rather than the Hobrecht plan (Bodenschatz 1987, 79).

Although Hobrecht participated in the 1848 revolution during his studies at the Bauakademie in Berlin, he was by no means a radical. His intention was not to interfere with the existing social order, but rather respect it and work with it. This is apparent in his planning principle of social and functional mix, which was already controversial at his time: Poorer and wealthier social groups were to live together in one building complex, while dwelling and work were to be integrated in the same city block. There is a social vision behind this concept, based on

the liberal bourgeois tradition of the time, whereby the lower classes learn from the upper ones through imitation, while the more affluent ones will be charitable toward the poorer ones through contact.

This is how Hobrecht himself explains this principle, which he clearly juxtaposes with the segregation of English towns: |ex[

Our way of living stands ... in fundamental opposition to the English one. ... Not "closure," but rather "permeation" seems to me morally and hence from a state point of view the right thing to do. ... In the tenement, children from the basement flat will use the same corridor as the children of the civil servant or the merchant on their way to high school. ... A mother from an English working-class neighborhood may leave her child unwashed, uncombed and shabby, but the mother from the basement flat of a tenement will be ashamed to do it, because she knows she is being observed and will be scolded by better neighbors. (Hobrecht 1868, 14–15)

Jfo[This principle was criticized both by the more conservative circles, which believed in clear spatial segregation between classes, and by the growing revolutionary movements, which aimed at the consolidation of the working classes and a polarization of society, which would eventually overthrow the existing order.

The Hobrecht Plan provided the outline for the development of a big part of Berlin and it is still visible today in large areas of the inner city. Manufacturing units are still to be found in residential complexes today, which creates a peculiar combination known as *Kreuzberger Mischung* ("Kreuzberg Mix") (Fiebig, Hoffmann-Axthelm, and Knödler-Bunte 1984). Later criticism concentrates on the incompatibility of dwelling and manufacturing uses inside the same city block. In particular Hegemann's sharp criticism from 1930 reflects the new tendency for clear zoning and separation of uses in urban areas. Nonetheless the plan was never implemented in its entirety: for example, the two major developers who in the late nineteenth century bought land in the southern part of Prenzlauer Berg amended the street pattern by cutting through the large city blocks and widening public squares, thus hoping to increase their plot value (Haeder and Wüst 1994); and in Schöneberg, one of the large axes that were to cut through the city in an east–west direction, linking Breitscheidt Platz with Hermann Platz, was interrupted by the new train stations, Potsdamer and Anhalter Banhof (Hegemann 1930/1976, 224–228).

Whereas Hobrecht is mostly remembered for the 1862 Berlin development plan, undoubtedly one of his major contributions is the modernization of the sewerage system, which he first designed for Stettin/Szscecin but only implemented in Berlin after 1869. Hobrecht was part of a broader Berlin movement, which, starting in the mid-nineteenth century and following several epidemics of cholera, believed in the role of central planning in sustaining and improving public health. Politicians such as medical doctor Rudolf Virchow (1821–1902) considered contemporary sewerage, like that already seen in parts of England, to be indispensable for the improvement of public health in the capital. The main innovations of Hobrecht's sewerage system consisted in the organization of separate networks, which could be maintained individually, and in reversing the direction of sewage from the inner-city rivers and canals toward fields in the periphery. Although sewage farms were progressively replaced by treatment plans, a small number of them still operated until the end of the twentieth century, leaving behind them severe problems of soil pollution.

SEE ALSO:EURS0075; EURS0142; EURS0145; EURS0232; EURS0300; EURS0438; EURS0484

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