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Planning the Nation: the sanatorium movement in Germany

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With the nineteenth-century conviction that cities were true breeding grounds for disease, in particular tuberculosis, also came the theory that there were places of health outside of the city. The medical theory of the 'immune place', developed by Hermann Brehmer in the 1850s, would serve as the impetus for the development and justification of the tuberculosis sanatorium, which, as the 'place of health', was to be situated in natural surroundings, ideally in the dry air of an unspoiled mountain region.

The first sanatorium dedicated to the treatment of tuberculosis was Görbersdorf in Silesia. It prompted a great number of successors and, by the end of the nineteenth century a veritable sanatorium or 'Heilstätten-movement' had taken place in Germany. However, the treatment did not prove as successful as initially hoped and, during the 1899 Conference on TB in Berlin, alternatives in the fight against the disease were considered, among them the 'home sanatorium', proposed by the military surgeon Dr von Unterberger. He attempted to bring the place of health back into the city, and therefore to ignore the demand for a particular site, the precondition of the original sanatorium cure.

This paper will discuss the way in which the renunciation of site specificity, which led the sanatorium idea itself *ad absurdum*, provided new opportunities for the strategic governing of the young German Nation. The idea of a sanatorium network would now come to be associated with the idea of an evenly distributed grid determined by its distance from certain cities, their population density and other statistical or measurable indicators, which had become important in political decision-making processes. Less dependent on regional characteristics and on the necessity to acquire a particular location, centralised planning became feasible, which enabled the government in Berlin to project and advance a close-meshed institutional network and therefore stabilise its power.

Introduction

Developments in medical thinking, changing ideas and ideals of health and disease, have a long history of familiar exchanges with architecture and the thinking of the city.¹ This is particularly true for tuberculosis, which spread rapidly in wide parts of Europe during the nineteenth century.

TB, and especially the tuberculosis sanatorium, have recently experienced increasing attention in the field of architectural history and theory: Paul Overy has discussed the role of the sanatorium within the Modern movement² and Margaret Campbell has looked at the therapeutic roots of characteristic architectural features of the

sanatorium and their influence on modern architecture and furniture design.³ In a similar way to Beatriz Colomina's discussion of 'The medical Body',⁴ both Overy and Campbell explore the influence TB and the tuberculosis sanatorium had on the domestic realm and the body.

This paper, however, concentrates on the relationship between the sanatorium and the city, and the spatial implications related to the planning of the disease within a specific national context. 'Planning the Nation' focuses on the role architecture plays in realising medical or (bio-) political aims and strategies, and thus helps to bridge a gap between the perspective provided by social historians such as Flurin Condrau⁵ or Jorge Molero-Mesa⁶ and the perspective commonly provided by architectural historians and theorists in regards to the medical institution.

Corresponding to recent publications drawing on Michel Foucault's work, such as those by Dana Arnold⁷ and Sven-Olov Wallenstein,⁸ this article examines how the medical institution relates to society as a whole and to the wider urban environment through the spatial analysis of the German sanatorium movement.

Tuberculosis became associated with the industrialised city, long before Robert Koch in 1882 discovered a bacterium to be the actual cause.⁹ After receiving the Nobel Prize in 1905, Koch explained in his address to the ceremony's audience what by the turn of the century had become widely accepted: TB was an airborne disease. Therefore, 'even the smallest drops of mucus expelled into the air by the patient when he coughs, clears his throat, and even speaks, contain bacilli and can cause infec-

tion'.¹⁰ The overcrowded living conditions caused by industrialisation and subsequent population growth in many European cities constituted therefore favourable conditions for the spread of the lung disease.

This was particularly true for Berlin. Compared to other European countries such as England or Belgium, Germany had been industrialised later but with even more ferocity. While the German population altogether doubled between 1871 and 1910, the capital's population grew by a dramatic 300% within only thirty years (between 1856 and 1886).¹¹ It is estimated that during this period more than 120,000 Berlin citizens had to live in cellars. Refuges for the homeless were constantly overcrowded. By the end of the nineteenth century it had become common practice to occupy the newly built tenement blocks for the first months with so called 'Trockenmietern', tenants who would stay in the flats until they had dried or dehumidified. This had drastic consequences for the tenants' health, since the humid conditions weakened the respiratory organs especially.

With tuberculosis, and the growing conviction in the nineteenth century that cities were true breeding grounds for disease in particular, also came the theory that there were places of health outside the city. Dr Hermann Brehmer (1826–1889) opened the first sanatorium, the first 'place of healing', for tuberculosis patients in the mountains of Silesia in 1854. His theory of the 'immune place' served as the impetus for the justification of the sanatorium, which was to be situated far from the damaging city environment in natural surroundings, ideally in the dry air of an unspoiled mountain region. The

main argument for the implementation of sanatoria had been the prospect of a cure for the individual patient and in the last decades of the nineteenth century a veritable sanatorium or 'Heilstätten movement' occurred in Germany.

Although tuberculosis was not exclusively a disease of the poor, the working class seemed the more likely victim.¹² The balancing of social differences, a charitable or humanitarian act, was therefore an important aspect of this movement. Yet social motivation alone cannot explain the vigour with which the construction of Heilstätten advanced in these decades. The economic interest also has to be considered: given that mostly younger workers were affected, TB was considered a serious threat to a young nation's economy. Indeed, during the second half of the nineteenth century more than 100,000 people were estimated to fall victim to the disease each year in the German territory.¹³

Instead of the private sanatoria serving a clientèle who could afford the expensive stay at one of the alpine resorts it was the 'Volksheilstätten' (sanatoria for the people), sometimes also called 'Arbeiterheilstätten' (sanatoria for the workers), which were increasingly regarded as a strategy to confront tuberculosis. The Red Cross, state insurance companies and also industrial companies would therefore build and direct Volksheilstätten in order to bring the workers back to the factories and to diminish the losses caused by early pension payments.

However, the treatment did not prove as successful as was initially hoped. Although the condition of many patients initially improved, they suffered relapses sooner or later and during the 1899 Conference on TB in Berlin alternatives in the fight against

the disease were considered. This article will discuss one such alternative approach, the 'home sanatorium' proposed by the military surgeon Dr von Unterberger. The home sanatorium was an attempt to bring the place of health back into the city, thereby ignoring the demand for a particular site and its climate, the precondition of the original sanatorium cure.

The 800-page protocol of the 1899 meeting in Berlin¹⁴ will serve as the main historical source for questioning why the sanatorium idea received ongoing governmental support even after, at the turn of the century, there was clear evidence for the sanatorium not providing the healing rates initially anticipated. Why did Germany, despite this scientific evidence, consider the construction of new Heilstätten not only as central but maintained it as the primary strategy in the systematic fight against TB?

This article will argue that the Heilstätten movement had more than charitable, medical or even economic ends. It is, indeed, the politically strategic role that the creation of a sanatorium network would realise in the stabilisation of the German nation which compensated for the lack of trust in the sanatorium's actual therapeutic success.

The renunciation of site specificity, which led the sanatorium idea itself *ad absurdum*, provided new opportunities for the strategic governing of the young German nation. Less dependent on regional or natural characteristics and on the necessity to acquire a particular location, centralised planning became feasible, which enabled the central government in Berlin to project and advance a close-meshed institutional network, and therefore stabilise its power.

Tuberculosis: the therapy

Since neither cause nor cure were understood until Robert Koch discovered the tuberculosis bacillus in 1882, and no pharmaceutical cure would be available until the 1950s, a variety of approaches to fight tuberculosis had been developed over the centuries. In 1854, the Silesian scientist and physician Dr Hermann Brehmer introduced the 'dietetic-hygienic treatment' in order to increase the resistance of the infected body and to strengthen the patients' self defence. The combination of a rest cure in fresh air (the 'sunbed-cure'), water applications, walks and open-air exercise, together with a rich, strengthening diet, organised within a disciplined daily routine, formed the treatment which remained the basis for the standard therapy against TB in the years to come. The dietetic-hygienic treatment was greatly indebted to the tradition of 'natural healing', an integral or holistic approach. The 'Naturheilkunde' regarded disease as the result of an estrangement between man and nature, and aimed to balance the patient's body and soul, to reconcile him with nature and thus with his nature.

The sanatorium, an answer to the City: Berlin

'Naturheilkunde' was in many respects an attempt to turn away from the industrialised city. With all systems—housing, traffic, water or sewage—hopelessly overloaded, the flats overcrowded, the city was considered a breeding ground for disease in general and TB in particular.¹⁵ It became accordingly 'the aim of the sanatorium movement [...] to demonstrate that the human body could be rested, relaxed and returned to health [...] through a period of separation from the unhygienic living

conditions of much urban [...] life'.¹⁶ Rather than to act upon the city, the idea was thus to look for a cure outside it. And with the conviction that cities were true breeding grounds for disease came also the theory that there were places of health outside the city. This theory of the 'immune place' incited and justified the development of the sanatorium.

The sanatorium as the 'other'¹⁷ to the city: Görbersdorf

Having witnessed during his medical studies the catastrophic health conditions in Berlin, and having himself conquered TB during a stay in the Himalayan mountains, Dr Hermann Brehmer developed the theory of the 'immune place'. He was the first to claim that TB was curable if treated, first, with the specific 'dietetic hygienic therapy' and, secondly, if this therapy was administered in particular, beneficial surroundings. The physician considered places as 'immune' when the native population had developed only few or no cases of TB. The theory was supported by important scientists and popular figures of the time, such as Johann Lukas Schönlein or Alexander von Humboldt, who believed that TB simply did not exist in certain mountainous regions.¹⁸ In 1854 Brehmer found in the Silesian village of Görbersdorf the perfect 'immune site' to establish his first private sanatorium (Fig. 1). Görbersdorf had been known for its healthy climate long before Dr Brehmer established his sanatorium. In 1954 the village was granted the official status of 'Kurort', a health resort, literally 'village or place of cure'.

Postcards from the second half of the nineteenth and early twentieth centuries depict the sanatorium

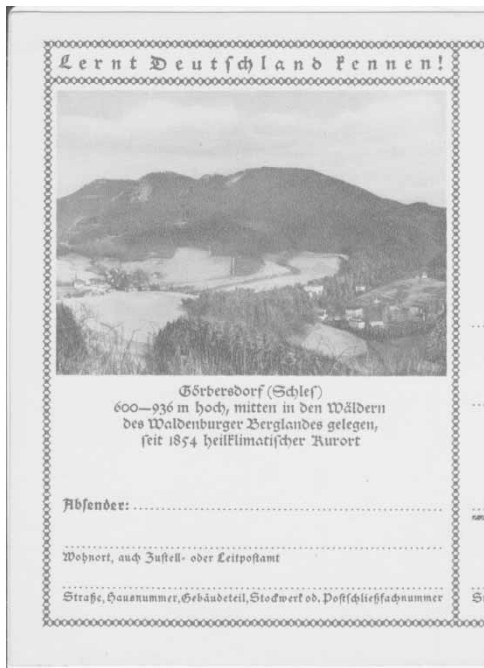


Figure 1. This postcard (mid-nineteenth century) advertises Görbersdorf's situation at a height of 600–936 m, in the midst of the Waldenburg mountains.

years sprang up in the Alps. As was the case with these institutions, Dr Brehmer only admitted private patients (Fig. 4).

In 1876, however, the first 'sanatorium for the people' was opened in Falkenstein, in the Taunus mountains close to Frankfurt. Directed by Brehmer's former patient and student Peter Dettweiler (1837–1904), this 'Volksheilstätte' offered sanatorium treatment for the first time to the poorer public and would thus become the paradigm for the creation of countless 'Volks-' or 'Arbeiter-Heilstätten' in the following years. Between the 1880s and the early twentieth century the construction of a considerable number of sanatoria providing treatment irrespective of the patient's financial standing was advanced with great enthusiasm, developing into a veritable 'Volksheilstätten' movement.¹⁹

However, through the foundation of the 'Central-Komite zur Errichtung von Heilstätten für Lungenkranke' (the Central Committee for the establishment of sanatoria for the lung diseased), later 'DZK',²⁰ the movement gathered momentum in 1895. Between 1897 and 1901, 46 new Heilstätten were created for Germany and in 1905 Robert Koch estimated that 'about 30,000 patients' were then 'getting treatment each year in over 100 sanatoria'.²¹

A map of Germany from 1899 (see Figure 13 below) indicates 35 sanatoria exclusively dedicated to the treatment of TB. Amongst them were small privately run houses, which accommodated less than a hundred patients, but also large institutions such as the Beelitz Heilstätten (directed by the State Insurance Company of Brandenburg), which provided beds for 2,000 patients.

buildings embedded in a raw and unspoilt mountain region, providing the romantic vision of an almost untouched pastoral landscape (figs 2, 3). Although neither of Brehmer's theories could be unambiguously proven, the mountain setting became the site *par excellence* for the place of health, ultimately the only place considered appropriate for the TB patient.

From sanatorium to Volksheilstätte

Görbersdorf had been the first in a tradition of more or less luxurious institutions, which in the following

Figure 2. Postcard: Dr Brehmer's sanatorium in the Silesian village of Görbersdorf (now Sokolowsko).



The founding bodies were typically charitable organisations, insurance companies in cooperation with the national health insurance fund or the Red Cross. Moreover, the industry had recognised in the Volksheilstätte a tool to lessen the burden that tuberculosis had brought to bear upon its social and pension systems. Given that TB was likely to bring about a long-term dependency of the patient and his family on the social network, in 1892 the 'Badische Anilin- und Sodafabrik', known as BASF, was the first in a succession of companies to open

the sanatorium 'Dannenfels am Donnersberg' for its infected factory workers with the aim to restore their earning capacity.

The statistical chart, which was presented during the 1899 Conference on TB in Berlin, conveys the outcome of the treatment of 100 Dannenfels patients between 1893 and 1898. The patients had been treated for at least six months up to one year but the results hardly proved ideal. While one third of the patients was considered fit for work after their stay at Dannenfels, the rest of the patients



Figure 3. Postcard:
'View of the
Görbersdorf Valley'.

had shown little or no improvement. 29 patients had died, and 15 had escaped from the sanatorium before the end of the cure (Fig. 5).

RESULT:

- | | |
|---|----|
| I. Healed [fit] for resumption of work in the factory | 21 |
| II. Much improved, almost healed, able to resume factory work | 16 |
| III. Improved, hardly temporarily fit for work | 12 |
| IV. Improved, fit for work until the second hospitalisation in Dannenfels | 4 |
| V. Escaped before the termination of the cure | 15 |

- | | |
|---|----|
| VI. Unimproved, died shortly after return | 25 |
| VII. Died in Dannenfels | 4 |
| VIII. Still in Dannenfels | 3 |

The term 'healed' which is used in categories I and II needs to be put into perspective. From today's point of view it would be more precise to speak of a temporary recovery, which enabled the patient's return to the workforce. Given that only a period of five years was considered, and no conclusive blood tests were then available, it was not possible to evaluate whether patients had indeed been absolutely cured from TB. As Flurin Condrau has recently

Figure 4. An early newspaper advertisement (1887) for Dr Brehmer's sanatorium notes that 42 marks had to be paid per week and per patient.



demonstrated through tracing patient records documenting the patients' lives after their sanatorium sojourn, clinical healing of the disease was hardly ever obtained. Many ex-patients (30–50%) died within the following five years and the great majority of the rest would sooner or later suffer relapses.²² That the sanatorium was unlikely to produce a permanent cure, however, was no secret to scientists in the 1890s. Doctors and important health politicians, such as Rudolf Virchow and Robert Koch, were sceptical about the treatment's real therapeutic value.²³

In his 1905 Nobel lecture, Koch speaks of a 'relatively small number of real cures obtained in the sanatoria'. He explains that while 'sanatoria were established in the expectation that a great part,

perhaps even the majority of consumptives can be cured in them (...) there is a good deal of argument as to the result of the sanatoria'.²⁴

Moreover, in 1907, the head of the 'Hygiene Institut' in Berlin, Alfred Grotjahn, had to admit openly that instead of the estimated 30%, only 3.4% of the patients were actually cured, and five years after the cure more than 66% of the former patients had become 'invalids'.²⁵ While from the perspective of the individual patient a temporary recovery was of course a success, from the perspective of the 'Volks-gesundheit', the health of the overall population, this temporary recovery could be considered counterproductive. Koch argued that when relapses occurred the previously treated patients were likely to develop 'open TB', a particularly dangerous

Heilstättenfürsorge der Badischen Anilin- und Sodafabrik in Ludwigshafen.

Von Dr. Westhoven in Ludwigshafen.

Resultat:

I. Geheilt zur Wiederaufnahme der Arbeit in der Fabrik . . .	21
II. Sehr gebessert, nahezu geheilt, fähig zur Aufnahme von Fabrik- arbeit	16
III. Gebessert, kaum vorübergehend arbeitsfähig	12
IV. Gebessert, arbeitsfähig bis zur zweiten Einweisung in Dannenfels	4
V. Entlaufen vor Beendigung der Kur	15
VI. Ungebessert, kurze Zeit nach Rückkehr gestorben	25
VII. In Dannenfels gestorben	4
VIII. Noch in Dannenfels	3

Figure 5. Dannenfels BASF statistics 1899: focusing on the restoration of the ability to work, the chart demonstrates that an absolute or permanent cure was not necessarily the institutional aim (image from: G. Pannwitz, *Bericht über den Kongress zur Bekämpfung der Tuberkulose als Volkskrankheit*, p. 725; see Note 14).

stage of the disease, which made them more likely to infect co-workers, family members and others in their vicinity.²⁶

Yet despite the increasing scepticism of scientists from the 1890s onwards, despite statistics not delivering any evidence that a permanent cure could be obtained, the construction of new Volks-Heilstätten and the enlargement of already established institutions such as the Beelitz Heilstätten would continue well into the 1920s and 1930s.

Independence from the (alpine) location: the condition for the implementation of a Volkshelstätten network in Germany

Instead of turning away from the sanatorium and focusing on the living and working conditions in

the large cities, the sanatorium received, especially through the 'DZK', ongoing governmental support. As a consequence of the therapeutic results, however, while the 'dietetic-hygienic therapy' itself remained relatively unquestioned, the site of its application and the theory of the 'immune place' became an object of speculation. Was the tuberculosis cure as dependent on the alpine site and climate as had been assumed before? Or could recovery not also be obtained through the sanatorium treatment on—possibly even flat!—German ground? These questions would lead to a growing independence of the sanatorium from the specific site and thus constitute one of the preconditions for the attempt at a nation-wide sanatorium network for Germany.

Figure 6. Postcard:
'Beelitz-Heilstätten
Alps'.



In 1898 the foundation stone for one of the largest TB sanatoria in Europe was laid in Beelitz, in the 'Märkische Flachland', literally the flat land surrounding Berlin. Despite a location at 40 m and thus hardly above sea level, early postcards depict a landscape carefully crafted to resemble an alpine setting. Meandering walkways and rustic wooden bridges led the patients through artificial hills and an abundance of pine trees to carefully designed vistas (figs 6, 7, 8).

Although it was important to create the fantasy of an alpine environment, Beelitz demonstrates

that actual mountains were not considered an indispensable ingredient for the place of healing anymore. But if the site for TB treatment became less important might that not also be the first step towards the sanatorium itself becoming obsolete?

Towards universal applicability: the 'Haus-Sanatorium'

At the TB Conference of 1899 in Berlin, Dr von Unterberger, surgeon and director of the military hospital in Zarskoje-Selo, a small city south of St



Figure 7. Postcard:
'Beelitz Heilstätten View
of the Alps'.

Petersburg, suggested that with the 'Haus Sanatorium', the house or home sanatorium, TB therapy could be administered in 'every hospital, and every house'.²⁷ Von Unterberger had established such a 'Haus-Sanatorium' as a specialised department within his hospital. The treatment was based on the 'hygienic-dietetic regime'. The holistic approach, however, where the natural site was regarded as the very key to the patient's recovery, was dissected into single elements. Instead of the sunbed-cure, walks and exercise in natural surroundings, the 'Haus Sanatorium' provided a particular interior environ-

ment: well-ventilated rooms (the CO² content was described as the surest criterion for 'pure air'), a constantly controlled temperature ('8° to 10° in the bedrooms, 12° to 14° in the recreation room') and domesticated pine trees reminiscent of the former alpine sites.²⁸

What seems, from a today's point of view (and probably also in 1899), rather provocative was serious: the doctor suggested that the alpine environment with its real pine woods could be replaced by small pine trees in containers and pine tree branches in vases. Their smell should be

Figure 8. Postcard:
'Greetings from Beelitz
Alpine House'.



increased by sprinkling scented oils ('Ol. Pini silv. 10,3, Ol. Terebinth. pur. 30,0, Aq. font. 300,0') onto them whenever their natural scent had faded. Although von Unterberger could only present lower healing rates compared to other sanatoria and his suggestions were never implemented on a larger scale, they mark the extreme end of a more general change, abandoning the 'back to nature' idea.²⁹ What had originally been provided by the natural site was now to be provided by the building itself. The site-specific element of tuberculosis

therapy, the dependence on and collaboration with the natural site which was the initial precondition for the cure, was abandoned in favour of a move towards an artificial and thus universally applicable approach.

The natural surroundings were increasingly understood as a collection of fragmented elements, as what the Athens Charter would later refer to as 'natural elements' or the 'conditions of nature (...) sun, space and verdure'.³⁰ In future artificially constructed hills could thus be flattened since attempts



Figure 9. Paimio Sanatorium: solarium terrace and path below [1930s] (courtesy of Gustaf Welin, Alvar Aalto Museum).

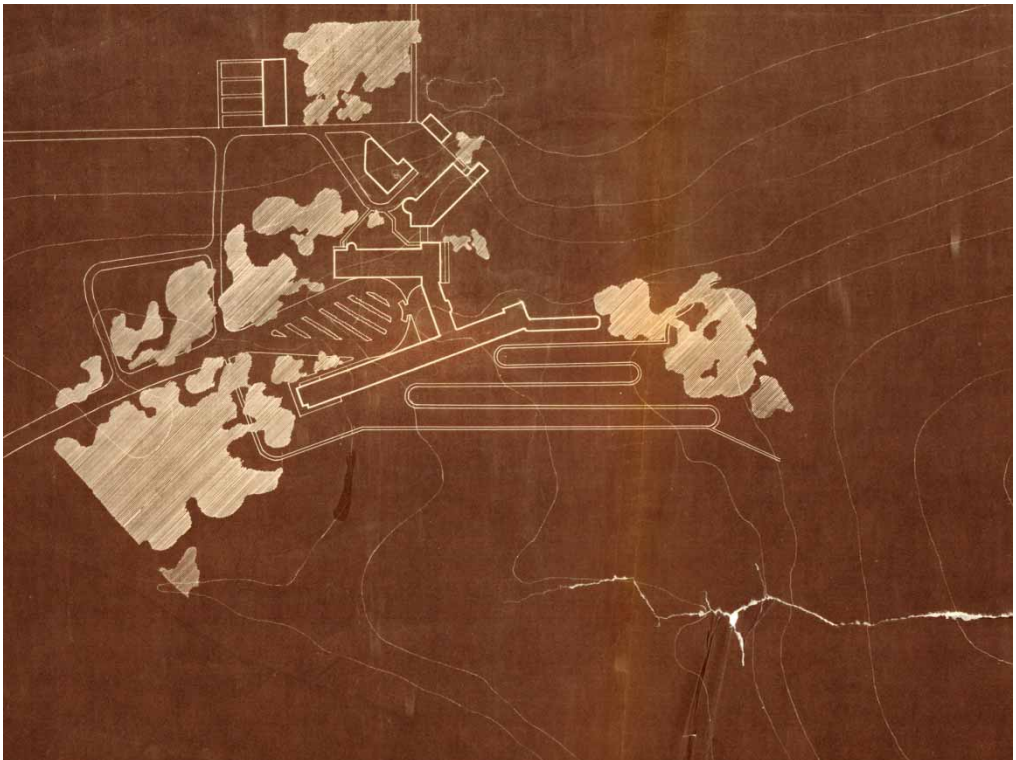
to imitate an alpine scenery would not be necessary anymore.

The independence, the formal freedom the planners were thus granted by the 1920s is epitomised by Alvar Aalto's Paimio sanatorium in Finland (1928–32). Where in Beelitz we find a number of 'attractions' placed along the extensive system of walkways through the surrounding woodland—from the daybed cure pavilions and

opportunities to play games to especially created views—which helped to integrate the building with its environment, Paimio presents us with a cross-country ski-track-like walkway, 'zigzagging formally toward the forest and arbitrarily circling around a series of small round pools' (figs 9, 10).³¹

Indeed, for the landscape design, Aalto probably took inspiration from the 1930 competition entry for the Vierumäki Sports Institute and, in an endea-

Figure 10. Paimio Sanatorium: site plan, detail, with serpentine walkway flanking the south side of the patient wing [1930] (courtesy of the Alvar Aalto Museum, Drawing Collection).



avour to maximise its length at the favourable south side of the complex, the path constitutes an efficient extension to the building rather than an attempt to engage with the site.

This growing independence of place, however, was not only desirable from the point of view of architectural experimentation, but would open up the role of the Heilstätte as a political rather than a medical instrument.

The centralisation of the Heilstätten movement

In 1895 the decision was taken to subsume the individual Heilstätten endeavours under one central direction. Situated in Berlin, the Central Committee for the establishment of sanatoria for the lung diseased (later 'DZK'), would from then on direct the construction of new sanatoria and coordinate the existing institutions, which had



Figure 11. Map of Germany [1866] (courtesy of the Royal Geographical Society [with IBG]).

emerged in the second half of the nineteenth century. Although the DZK was not officially an organ of national politics, its members largely consisted of national politicians and civil servants. Therefore the establishment of the DZK marks the transition from the fight against tuberculosis as a mainly charitable act towards its framing in terms of a social welfare policy. The patronage of the Empress Auguste Viktoria and the honorary chairmanship of the Reichs-Chancellor Fürst zu Hohenlohe Schillingsfürst further illustrates the political importance assigned to the task to centralise all the singular and sub-state endeavours under one national direction.³²

Interestingly, the DZK started its operation at the very moment when the therapeutic value of the sanatorium was increasingly in doubt and when, despite the initial optimism, patient statistics had failed to provide evidence of the anticipated positive results. But why did the national government advance the Heilstätten-movement despite the increasing uncertainty about its long-term therapeutic success? To approach this question, we need to take the political situation in Germany at the time into consideration and, in particular, review Otto von Bismarck's legacy.

Volkshelstätten-movement and the nation: the 'institutionalisation of tuberculosis'³³ in Germany

Germany was composed of a patchwork of 26 princely states and dukedoms ('Bundesstaaten' or constituent states; Fig. 11), which gave allegiance only in 1871 to the Prussian King, Wilhelm I, who thus became German Emperor. In this constitutional mon-

archy Prussia was the largest state, with 65% of both territory and population. Under the Chancellor, Otto von Bismarck, in office from 1871 to 1890, Prussia was assigned the leading role in the formation of the German nation.

Many of the states were reluctant to subsume parts of their sovereign powers in a central government dominated by Prussia, and the initially fluid relationships between the new imperial framework, with Berlin as its centre, and its various components still had to be negotiated and developed. Bismarck accordingly paid much attention to the internal stabilisation and construction of the nation, the 'innerer Reichsausbau'. His efforts had the aim to level out the differences between the German states in order to ensure a successful future, and to turn this young and fragile alliance into a unity.³⁴

The country, however, needed to be secured not only against the potential threat of independence being sought by the incorporated states, but against what Bismarck considered as particularly dangerous to internal stability: the rise of the Social Democrats ('Sozialdemokratische Partei Deutschlands—SPD'). The 'Sozialgesetze' (German social legislation) and the implementation of the national health care system, which are considered to be Bismarck's greatest internal political achievements, are therefore also to be considered as a 'positive fight against the socialists',³⁵ since these policies would take the wind out of his opponents' sails and ideally diminish support for socialism.

The problem of tuberculosis obtained in this context an interesting role: given the high numbers of the working class who had fallen victim to TB, the disease came to be framed as a 'Volksseuche'

(a people's epidemic), and, as such, as a problem of the entire nation. Although the political situation made a united fight against TB difficult, this united fight was a desirable objective, since the Heilstätten could serve as built evidence of the government's concern for the needs and demands of the working classes.³⁶

The fear of a rise of socialism was also fuelling reforms in other European countries. According to Jorge Molero-Mesa, exploring anti-tuberculosis policies in Spain between the 1870s and 1930s, the conditions of the working class were also to be improved there in order to 'counter working class demands'.³⁷ Medico-social reforms in Spain were, however, not supported, as in Germany, by compulsory health insurance schemes, but developed within a welfare-charity framework, which could only distribute limited funds. Instead of using these funds for the construction of sanatoria or to aim at, an even more costly, fundamental improvement of the 'workers' insanitary living and working conditions', public campaigns aimed at 'changing the values, the behaviour and the way of life of the working class, all of which were promoted as the "real" causes of tuberculosis'.³⁸

Although neither the German nor the Spanish authorities invested significantly in an improvement of working and housing conditions, the Heilstätten could be used as an emblem of benevolence. The German State thus sent out a signal of support and assistance by means of the public sanatoria, whereas in Spain responsibility remained with the people. This attitude certainly helped to sharpen the conflict between socialist and conservative forces in the early years of the twentieth century in

Madrid, where socialist leaders finally argued that 'only the establishment of socialism could produce full health for the whole population',³⁹ and increasing recognition of poverty as tuberculosis's cause was used 'by socialists as a political weapon'.⁴⁰ A comparison with Spain thus demonstrates that, to secure and stabilise the conservative government it was a good idea to invest in the sanatorium despite its disappointing medical performance.

Irrespective of its actual therapeutic results and the healing rates, the Heilstätten had therefore an important symbolic function in demonstrating social justice. The attempt to appropriate the existing private and communal endeavours and to align them with a centralised network in 1895 was, however, a very concrete and straightforward attempt to gain influence in the constituent states. The establishment of a nationwide institutional Volksheilstätten network was a chance to manifest national power in the constituent states. Also after Bismarck's resignation in 1890, this strategy was in line with and has to be related to his idea about the internal stabilisation of the nation. Once implemented, this centralised institutional network would not be restricted to the treatment of TB but could then be used to prepare for 'further measures of public hygiene'.⁴¹

The independence of place as the precondition for planning

Ironically, it was the uncertainty about the therapeutic results that would entail the sanatorium's success in the following decades. It was the ongoing discussion surrounding the sanatorium's medical success which created a scientific vacuum

Figure 12.
Topographical map of
Germany [1866]
(courtesy of the Royal
Geographical Society
[with IBG]).



and opened up the possibility to instrumentalise the Heilstätten for political purposes.

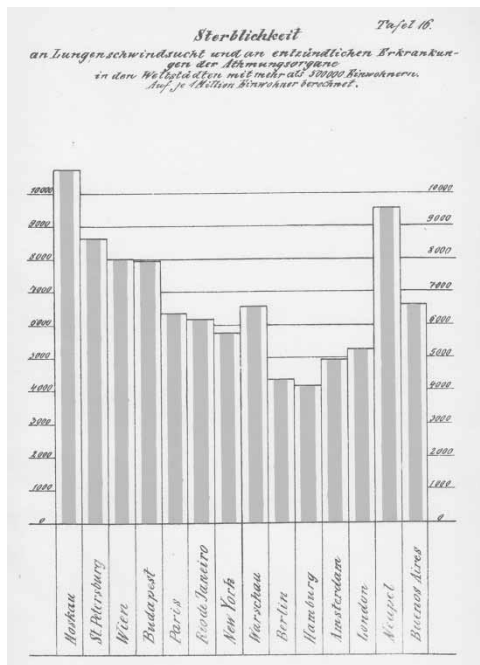
This function of the Heilstätte for political purposes was, however, only fully enabled through the sanatorium's increasing independence from a specific location. Through this independence the sanatorium site might be determined primarily by population distribution. The idea of a sanatorium

network could come to be more associated with the idea of an evenly distributed grid determined by its distance from certain cities, their population density and other statistical or measurable indicators, which had become important in the political decision-making processes. Less dependent on regional or natural characteristics and on the necessity to acquire a particular



Figure 13. The distribution of sanatoria, both private and public, in 1899; particularly indicated are Nrs 3,4,5, 'Görbersdorf' and the area around Berlin, with Nr.4 Beelitz, Nr.5 Belzig and Nr.10 Hohenlychen (image from: G. Pannwitz, *Bericht über den Kongress zur Bekämpfung der Tuberkulose als Volkskrankheit*, Appendix [amended by the Author]; see Note 14).

Figure 14. TB death rates in the 'cities of the world' [1899] (image from: G. Pannwitz, *Bericht über den Kongress zur Bekämpfung der Tuberkulose als Volkskrankheit*, Appendix; see Note 14).



location, centralised planning became feasible. It could be done from Berlin, by means of a map, a development which pointed towards modernist fantasies from 'tabula rasa' to 'universal validity'.

The comparison between the topographical map of Germany and a map of the existing Heilstätten in 1899 illustrates these developments (figs 12, 13). Although one would expect the higher density of institutions in the alpine regions of southern Germany, at the border with Switzerland or Austria,

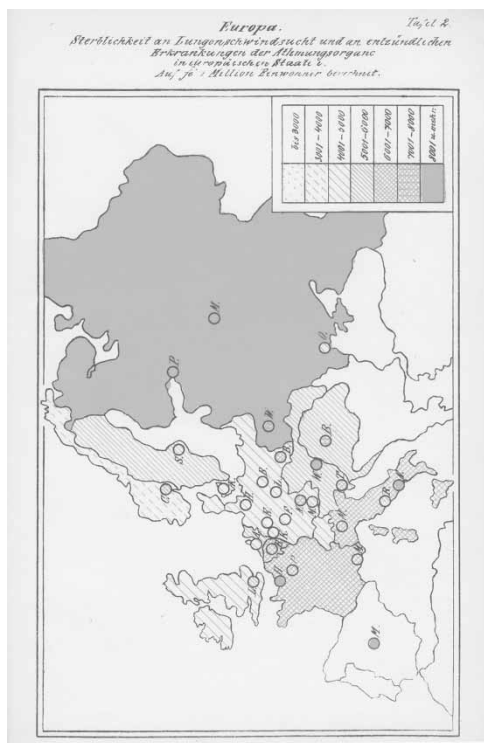
already by 1899 three significant sanatorium complexes, amongst them the aforementioned Beelitz Heilstätten, had been realised on the outskirts of Berlin, conveniently closer to the capital.

But the Heilstättenbewegung was not only used as an instrument of national politics. It would even play a role in the formation of Germany's international relationships.

The Heilstätten-movement: international relationships and national prestige

As much as the 1899 Conference on TB in Berlin was a means to establish international contacts (many papers were presented in French and some also in English), certain presenters could not help but stress the competitive aspect that 'the state's health' had in the European context. From reading those papers and the accompanying comparative statistics of the conference protocol on the Heilstätten-movement the underlying aims become clear: by means of the movement, and the reports of its success, Germany could establish itself within the circle of 'modern and cultivated states', and even aim to improve its international relationships. Dr von Leyden, for example, praises the efforts undertaken in various 'other cultivated Nations'. He especially looks to England for its extraordinary and charitable endeavour in relation to fighting TB.⁴² Therefore, whilst the fight against TB through the construction of sanatoria was framed as a common 'European' question and task, it also invited comparisons between nations.

The statistical chart and map which were added to the 1899 Conference protocol compare TB death rates. The first chart compares the death rates



related to diseases of the chest in the 'cities of the world' with more than 500,000 inhabitants (Fig. 14). Hamburg and Berlin, with an average of 4,000 deaths per 1 million inhabitants, had the lowest death rate. Moscow with almost 11,000 cases had the highest rate, which barely fits on the chart.

The European map illustrates the average death rates in the national states (Fig. 15). We note that Norway had the lowest, whilst Russia, again clearly, had the highest rate. Thus these maps,

which constitute only a fraction of a collection of 15 documents added to the publication of the Conference proceedings, are very close to what one could call nationalist-scientific propaganda.

Comparing the numbers of sanatorium places per citizen and TB death statistics became indeed a means thus to prove the nation's serious intent to be acknowledged in Europe where the medical and socio-political context is concerned. The number of sanatoria became an indicator for a degree of 'cultivation'.⁴³ But the idea of competition was not only directed towards cultural progress or the advancement of medical science. The fight against TB was considered of major economic importance.

The economic damage of tuberculosis was also acknowledged in other European countries: within Spain's development of social medicine and the related anti-tuberculosis policies, Jorge Molero-Mesa underlines 'the state's objective to produce a healthy and an abundant population to nurture (...) the economy'.⁴⁴ Through the 'social reproduction of a healthy population' in Spain, national efficiency should be improved, however, not only in the productive but also in the military fields.⁴⁵

It is not difficult to detect a similar purpose in the Heilstätten movement. Landesrath Meyer, for example, ended his contribution to the 1899 TB meeting in Berlin with what he seemed to consider to be the core of the effort: 'Let us realise that the more fierce the economic competition between the modern states will become, the more all forces need to be mobilised. That state will be superior which maintains the most healthy and productive population.'⁴⁶

Figure 15. TB death rates in Europe [1899] (image from: G. Pannwitz, *Bericht über den Kongress zur Bekämpfung der Tuberkulose als Volkskrankheit*, Appendix; see Note 14).

This statement implies that not only the productivity of a 'peaceful' industry was concerned. The idea of superiority in 1899 had military implications. Meyer states that not only the industrial companies and state insurance companies had an interest in the Heilstätten movement, but also the government which sought to 'secure and maintain the people's health, multiply the people's military strength and prosperity'.⁴⁷ The fight against TB and the associated international conferences provided thus an open stage for national competition. Death statistics or the number of newly constructed sanatoria could be interpreted in terms of medical-science, cultural refinement and even military power.

Conclusion

Coming back to the initial question: Why did the sanatorium idea receive ongoing governmental support even after the turn of the century, when the healing success was increasingly in doubt? Given the scope of this paper, it has not been possible to propose a complete answer and to discuss all relevant aspects leading to the ongoing support of the Heilstätten-movement in Germany. It has not been possible to elaborate on the sanatorium's economic role, or its value in terms of isolating the ill from society, or its educative dimension, or, equally importantly, its role as a place of research.⁴⁸

However, the paper has aimed to underline the significance the Heilstätten network had for the political stabilisation of the young German nation: irrespective of its actual permanent therapeutic success. Ironically, it was indeed the uncertainty about therapeutic success which created a scientific vacuum and

opened up the possibility to instrumentalise the Heilstätten for political purposes.

The Heilstätten-movement could be labelled as being 'for the good of the entire Nation', the well-being or the welfare of the people, which would ultimately counteract socialist tendencies and thus strengthen the national government. The centralisation of the fight against TB and the establishment of a sanatorium network can, furthermore, be considered as offering an opportunity to establish a nation-wide administrative framework which could then be used for the planning and execution of future 'social-hygienic measures'. But this network could not only consolidate Imperial influence in the provinces but also, if the endeavour itself proved successful, might serve as a justification of the Empire itself nationally and internationally.

Growing independence from the 'immune place', the sanatorium's location in the (alpine) mountains, enabled the development of a nationwide sanatorium network, centrally directed from Berlin, and thus provided advantages and new opportunities for strategic government and the planning of the German Nation.

Abandoning the concept of the particular site, advocated by the initial medical theory, led the sanatorium idea itself *ad absurdum*, but prepared the path for future architectural experimentation and ultimately turned the sanatorium into 'an ideal project on which to demonstrate the principles of Functionalism'.⁴⁹

Notes and references

(The translations of texts from the German are, unless otherwise indicated, provided by the Author.)

1. Greek and Roman city planning, and specific building types such as the Roman thermal springs or later the monastery, are but a few examples.
2. Paul Overy, *Light, Air and Openness. Modern Architecture between the Wars* (London, Thames & Hudson Ltd, 2007).
3. Margaret Campbell, 'What Tuberculosis did for Modernism—The Influence of a Curative Environment on Modernist Design and Architecture', *Medical History*, 49 (2005), pp.463–488.
4. Beatriz Colomina, 'The medical Body', in *Anybody*, Cynthia Davidson, ed. (Cambridge Mass., The MIT Press, 1997).
5. F. Condrau, *Lungenheilstalt und Patientenschicksal. Sozialgeschichte der Tuberkulose in Deutschland und England im späten 19. und frühen 20. Jahrhundert* (Göttingen, Max-Planck-Institut für Geschichte, 2000). Flurin Condrau's research on the institutional treatment of TB provides a focused perspective on the German Heilstätten- movement and is therefore particularly relevant for this paper. However, while Condrau demonstrates how TB was instrumentalised for political purposes, 'Planning the Nation' further concentrates on the spatial implications and the role architecture occupies in the ordering of the relationship between state, institution and population.
6. Jorge Molero-Mesa, 'The right not to suffer consumption: Health, Welfare Charity, and the Working Class in Spain during the Restoration Period', in *Tuberculosis then and now—Perspectives on the History of an Infectious Disease*, F. Condrau, M. Worboys, eds (Montreal, McGill-Queen's University Press, 2010), pp.171–188. Similarly to Molero-Mesa, who explores anti-tuberculosis policies in Spain between the 1870s and 1930s, Susan Craddock also aims to demonstrate that the anti-tuberculosis campaign of the early twentieth century in the United States was not merely a project of disease prevention but rather of social engineering:
7. Dana Arnold, 'Engendered/endangered: women, tuberculosis, and the project of citizenship', *Journal of Historical Geography*, 27 (2001), pp.338–354.)
7. Dana Arnold, *The spaces of the hospital—Spatiality and urban change in London 1680–1820* (Abingdon, Oxfordshire, New York, Routledge, 2013). Dana Arnold examines how hospitals operated as a 'complex category of social, urban and architectural space' in London from 1680 to 1820. Investigating both the internal functioning of the institutions and their interaction with the city, she argues that the hospital played an important part in the transformation of the city into a modern metropolis.
8. Sven-Olov Wallenstein, *Bio-Politics and the Emergence of Modern Architecture* (New York, the Buell Center/ FORuM Project and Princeton Architectural Press, 2009), p. 20: proposing the modern health institution as 'an essential part of the bio-political machine', Wallenstein relates Foucault's theory of bio-politics to the emergence of modern architecture.
9. The bacteriologist Robert Koch discovered a staining technique, which finally allowed for the isolation of *Mycobacterium tuberculosis*, in 1882 in Berlin. The discovery corrected previous theories about the hereditary nature of the disease.
10. Robert Koch, 'The current state of the struggle against tuberculosis', in *Nobel Lectures, Physiology or Medicine 1901–1921* (Amsterdam, London, New York, Elsevier Publishing Company, 1967), pp.169–178; p.171.
11. J. Voigt, *Tuberkulose. Geschichte einer Krankheit* (Cologne, vgs Verlagsgesellschaft, 1994), pp.101–102.
12. Flurin Condrau questions whether it was indeed 'the poor' who were more likely to become TB infected or whether vice versa—TB infection had caused the poverty in the first place: F. Condrau, *Lungenheilstalt und Patientenschicksal, op. cit.*, p. 38. Given that the information that fed the statistics was mostly taken

at the moment of the patients' deaths, it was indeed difficult to make a clear distinction between cause and effect.

13. To be more precise: in the territory, which, from 1871 onwards, would form the German Empire.
14. Gotthold Pannwitz, ed., *Bericht über den Kongress zur Bekämpfung der Tuberkulose als Volkskrankheit* (Berlin, Deutsches Central-Komitee zur Errichtung von Heilstätten für Lungenkranke, 1899).
15. Jürgen Voigt somewhat pragmatically states: 'the death [in case of a TB infection] came quicker in the cities, since the hygiene was rather worse than in the country'; J. Voigt, *Tuberkulose*, *op. cit.*, p.41. Today the connection between housing conditions and tuberculosis is not uncontested. What exactly was responsible for the increase or decrease of TB cases during certain periods of time varied: according to different theories, it ranged from the availability of soap to improper nutrition. However, during the early twentieth century the connection between the humid and crowded housing conditions of Berlin and tuberculosis was not much in doubt.
16. P. Overy, *Light, Air and Openness*, *op. cit.*, p. 22.
17. I borrow Michel Foucault's term 'the other (place)' which he uses to describe the idea of 'heterotopia': 'Of Other Spaces: Utopias and Heterotopias', in *Rethinking Architecture: A Reader in Cultural Theory*, N. Leach, ed. (New York, Routledge, 1997), pp. 330–336. Heterotopias are identified as 'counter-sites', places 'outside of all places'. Foucault describes the role of the 'heterotopia of compensation' as to create 'a space that is other, another real space, as perfect, as meticulous, as well arranged as our is messy, ill constructed and jumbled'. Heterotopias such as prisons, holiday villages, psychiatric hospitals and also cemeteries are to Foucault spaces which are 'connected with all the sites of the city', yet detached from the city. Therefore they constitute 'the other place'. Foucault, however, never looked at space as a primary object of study. Therefore this paper will not elaborate on the relationship between the sanatorium and heterotopia.
18. S. Hähner-Rombach, 'Künstlerlos und Armenschicksal', in *Das große Sterben—Seuchen machen Geschichte*, H. Wilderotter, M. Dormmann, eds (Berlin, Jovis, 1995), pp. 278–307; pp. 286, 287. Today the rarity of TB infections in many mountain regions is explained by the isolation of these places during the nineteenth century.
19. With the installation of health-care during the 1880s, a precondition for the financing of the Heilstätten-movement was established. Created in order to secure the financial risk in case of disease, both the 'Krankenversicherung' (the compulsory health insurance) from 1883 and the 'Invalidenfürsorge' (invalid-care) in 1889 would come to play a major role in the fight against TB. The national health insurance funds and the newly founded insurance companies of the constituent states ('Landesversicherungsanstalten—LVAs') became involved in the construction and direction of Heilstätten.
20. The organisation intended to engage in the general fight against TB and in 1906 accordingly changed its name to 'Deutsches Zentral-Komitee zur Bekämpfung der Tuberkulose', or 'DZK' for short: F. Condrau, *Lungenheilstalt und Patientenschicksal*, *op. cit.*, p.104.
21. R. Koch, 'The current state of the struggle against tuberculosis', *op. cit.*, p.175. See also: S. Hähner-Rombach, *Sozialgeschichte der Tuberkulose: vom Kaiserreich bis zum Ende des Zweiten Weltkriegs unter besonderer Berücksichtigung Württembergs* (Stuttgart, Steiner, 2000), p. 163.
22. Condrau analyses in this context the statistical documentation from the Imperial Insurance Department ('Reichsversicherungsamt'), specifically the treatment success rate between 1897 and 1914, to show that the healing success remained unsatisfactory. Whilst

- the initial 'healing success'—referring here to the patient's ability to return to work—could be raised to up to 92%, follow-up examinations in the years after the patient's discharge from the sanatorium showed that the percentage quickly decreased. Thus of the 1,908 treated patients less than 48% were still able to work 5 years after their treatment: F. Condrau, *Lungenheilstalt und Patientenschicksal*, *op. cit.*, p.280.
23. *Ibid.*, p.148.
 24. R. Koch, 'The current state of the struggle against tuberculosis', *op. cit.*, p.175.
 25. J. Voigt, *Tuberkulose*, *op. cit.*, p. 147.
 26. 'Now it must be conceded that the 70% of successes [which some sanatoria claim to have obtained] does not refer to real cures, but only to the recovery of earning capacity. But from the standpoint of prophylaxis there is no gain in this, since a patient who is not completely cured but is only improved to the extent that he is capable of earning again for a while, later develops the condition of open tuberculosis, and succumbs to all its consequences': R. Koch, 'The current state of the struggle against tuberculosis', *op. cit.*, p.175.
 27. S. von Unterberger, 'Haus-Sanatorien in prophylactischer Hinsicht im Kampfe mit der Tuberkulose', in *Bericht über den Kongress zur Bekämpfung der Tuberkulose als Volkskrankheit*, G. Pannwitz, ed., *op. cit.*, pp. 656–658; p. 656—original quotation: 'Die Grundsätze der Phisotherapie aber lassen sich in jedem Hospital, in jedem Hause in hohem Grade durchführen.'
 28. *Ibid.*, p.657. Von Unterberger's experiment had been described in much detail already in 1898, one year previous to the TB Conference, in the 'Deutsche militärärztliche Zeitschrift'. (S. Von Unterberger, 'Über die Nothwendigkeit der Einrichtungen von Haussanatorien für Tuberkulose in den Militärhospitalern mit Berücksichtigung des heutigen Standpunktes über die Tuberkulosefrage', *Deutsche militärärztliche Zeitschrift*, 1 (1898), pp. 14–27.
 29. Von Unterberger admits probably more honestly than some of his colleagues that out of 346 patients who had been treated in the Haus-Sanatorium over four years, only 18 or 5.4% were considered and discharged as 'relativ geheilt' (relatively cured); 137 (39,8%) as 'gebessert' (improved); 171 (49,4%) were discharged without result or in worse condition; 20 patients died during the cure. 'Absolute healing' could not be obtained: 'Absolute Heilung habe ich nicht zu verzeichnen gehabt'; S. Von Unterberger, 'Haus-Sanatorien', *op. cit.*, p. 657.
 30. Le Corbusier, *The Athens Charter* (New York, Grossman Publishers, 1973), p. 55.
 31. Paul David Pearson, *Alvar Aalto and the International Style* (New York, Whitney Library of Design, 1978), p. 89.
 32. The list of members of the DZK steering committee itself reads like a 'who's-who' of political celebrities. Imperial State secretaries, Royal secretaries of Bavaria or Prussia alternate with State ministers and 'Geheimen Räten', high-ranking civil servants. Cf. G. Pannwitz, *Bericht über den Kongress zur Bekämpfung der Tuberkulose als Volkskrankheit*, *op. cit.*, p. 839.
 33. Flurin Condrau coined this expression in his discussion of the topic: F. Condrau, *Lungenheilstalt und Patientenschicksal*, *op. cit.*, p. 274.
 34. Cf. M. Hergt, W. Hilgemann, H. Kinder, eds, *Dtv-Atlas Weltgeschichte Band 2. Von der Französischen Revolution bis zur Gegenwart* (Munich, Deutscher Taschenbuch Verlag, 2009), p. 353.
 35. *Ibid.*, p. 355.
 36. Wolfgang Seeliger and Sylvelin Hähner-Rombach explain the political function of the Volksheilstätte as being a means to restore confidence in the state and counterbalance socialist currents in more detail. Cf. W. Seeliger, *Die Volksheilstätten-Bewegung in Deutschland um 1900 zur Ideengeschichte der Sana-*

- toriumstherapie für Tuberkulose* (Munich, Profil, 1988) and S. Hähner-Rombach, *Sozialgeschichte der Tuberkulose*, *op. cit.*
37. Jorge Molero-Mesa, 'The right not to suffer consumption', *op. cit.*, p. 182; Molero-Mesa, also (p.172) speaks in this context of 'softening the class struggle by improving the living conditions of the most disadvantaged social strata'.
 38. *Ibid.*, p. 173.
 39. *Ibid.*, p. 182.
 40. *Ibid.*, p. 181.
 41. Dr Pannwitz clarifies the aim of the formation of the DZK and thus the attempt to centralise the Heilstätten as to 'operate on the lower classes of society from which most TB patients came, in an educative manner which would prepare for the creation/implementation of further measures of public hygiene': G. Pannwitz, *Bericht über den Kongress zur Bekämpfung der Tuberkulose als Volkskrankheit*, *op. cit.*, pp. 1–2.
 42. Although having only 'recently commenced the methodical fight against tuberculosis', England was praised as the first nation to establish specialised hospitals for tuberculosis. Dr von Leyden names, for example, the Brompton Hospital, but especially the Royal Hospital for Diseases of the Chest, which offered 80 places for patients even by 1814: E. von Leyden, 'Entwicklung der Heilstättenbestrebungen', in *Bericht über den Kongress zur Bekämpfung der Tuberkulose als Volkskrankheit*, G. Pannwitz, ed., *op. cit.*, pp. 468–476; p. 469.
 43. Condrau refers to the number of sanatoria as an 'indicator for the [overall] institutional density' in a country: 'Die Anzahl der Heilanstalten stellt einen Indikator für die institutionelle Dichte in einem Land dar, der für deren gesellschaftliche Wahrnehmung entscheidend war'; F. Condrau, *Lungenheilanstalt und Patientenschicksal*, *op. cit.*, p. 58.
 44. J. Molero-Mesa, 'The right not to suffer consumption', *op. cit.*, p. 182.
 45. *Ibid.*, p. 173.
 46. Landesrath Meyer, 'Finanzielle und rechtliche Träger der Heilstätten Unternehmungen', in *Bericht über den Kongress zur Bekämpfung der Tuberkulose als Volkskrankheit*, G. Pannwitz, ed., *op. cit.*, pp. 477–488; p. 488.
 47. *Ibid.*, p.478: Meyer speaks of the '... Sicherung und Erhaltung der Volksgesundheit, sowie Mehrung der Volkswehrkraft und des Volkswohlstandes.'
 48. While the direct therapeutic success of the institution was openly doubted by the turn of the century, at least in medical circles, prophylactic success in terms of epidemic prevention through hygienic education, and more so through isolation, was commonly acknowledged. The supporters of the sanatorium movement had, according to Condrau and despite the lack of proof of its long-term therapeutic value, important arguments for their continuing operation.
 49. Richard Weston, *Alvar Aalto* (London, Phaidon Press Limited, 1995), p. 50.