

#### 4.2.3 The Search for Health in the high Alps of Switzerland: sanatoria treatments in Davos and Leysin.

Industrialisation created cities blighted by pollution, overcrowding, insanitary conditions and disease. Tuberculosis was one of the biggest killers in nineteenth century cities, especially among the young.

Until the late nineteenth century spas and climatic resorts were recommended to ease many disorders. Medical climatology, the belief that different climates had different effects on the body's constitution was a popular notion.<sup>1</sup>

Physicians recommended the mild climate of the Mediterranean to wealthy patients with TB and resorts on the North African coast and the South of France catered for small colonies of north European health seekers. As early as 1842, the English physician Dr John Davy had suggested that a mountain climate was likely to offer the best check to TB, often called consumption or sometimes diathesis, as "alpine people rarely had tubercles because of the greater respiratory activity occasioned by a rarefied atmosphere".<sup>2</sup> In other words breathing the air at high altitudes protected them from the disease. This hypothesis was developed further by the Hermann Brehmer who in his doctoral thesis in 1853 proposed that TB, if treated in its early stages, was always curable.<sup>3</sup> Without any controlled autopsy research, he mistakenly claimed that patients who died of TB had small, weak hearts due to poor circulation caused by diseased pulmonary tissue. His conclusion was that this could be corrected by a healthy, active life at high altitude. Brehmer himself had suffered from TB. A stay in a different climate had been recommended to him and he had gone to the Himalayas where he seems to have recovered.

Although Brehmer's thesis lacked empirical evidence he was able to convince others who supported him in setting up the first sanatorium for pulmonary tuberculosis in Gorbersdorf, Silesia. Patients lived in wooden chalets, followed a regime of carefully graded, mapped out walks coupled with long periods of rest and a nutritious diet. One of Brehmer's patients, Dr Peter Dettweiler, was not convinced by the small heart theory. He opened his own sanatorium at Falkenstein in the Taunus Mountains. Here the rest periods, taken on sheltered balconies, had the greatest emphasis.<sup>4</sup> Dettweiler also devised two items that

were to become symbolic of the sanatorium life: the *Liegestuhl* or sun lounger and the *Spucknapf* which in Davos was to be known as *Der Blaue Heinrich*, a pocket flask in which to spit the bloody mucous associated with TB.

These theories regarding the treatment of TB at high altitude had some scientific basis. Higher up where the density of oxygen is lower, breathing is faster and the heart has to work harder to circulate blood. This can have a beneficial effect as the body increases the number of red blood cells and the respiratory and cardio-vascular systems are strengthened.

Spas too were popular because of their alleged healing properties. Switzerland was particularly blessed with mineral springs especially in the Alps where there were around a hundred of them. Folk medicine too offered some hope or at least comfort to sufferers. Switzerland could offer milk cures, fashionable in the mid-eighteenth century and cowshed cures, available in Davos from the 1850s. Gais in Appenzell was a centre for milk cures.<sup>5</sup> Here goats milk was brought down from the Alps daily by herdsmen while it was still warm. Combined with good food, fresh air and moderate activity this cure was popular as it was also relatively cheap. Cows' milk was also used in treatments and could be combined with spa baths as in Heinrichsbad. Cowshed cures were offered in Davos. In a cowshed the air including animal breath and body vapour was inhaled. The warmth and ammonia gases given off by the animals' urine was supposedly a balm for infected lungs. An example of this in Davos was a clergyman from Basle called Forchhammer who walked miles every day because of his work despite a respiratory disease. For a long time he slept in an ammonia-filled cowshed, the main part of his cure programme.<sup>6</sup> He also drank another staple of cures in that part of Switzerland, Veltliner wine brought over mountain passes from Italy. Switzerland had a long tradition as a place of healing with associated accommodation for patients and guests alongside. Partly, this was a legacy of the Romantic Movement which saw the Alps and their people as an embodiment of purity and health, the opposite of the polluted, disease-ridden cities that were developing in the industrial nations.<sup>7</sup>

It was a German, former law student, a refugee fleeing the backlash which followed the revolutions of 1848 in Heidelberg, Alexander Spengler, who was to be the instigator of altitude cures in Switzerland. Spengler gave up law and retrained in medicine in Zurich. With the support of a Swiss friend he met at

University he was appointed to the job of *Landschaftsarzt*, physician to the community of the Davos valley, a relatively remote mountain population.<sup>8</sup> Spengler observed that Davos people who had left the area to work in the cities or abroad where they caught TB soon recovered when they returned home. His conclusion was that it was the altitude, pure air and climate of the south-facing Davos valley that cured them.

Spengler began to treat consumptives in Davos from the 1860s. His theories spread when they were published in medical journals beginning in Germany.<sup>9</sup> It was this publicity that led to Davos becoming a year round health resort with the arrival of its first two winter visitors in early 1865. They were two desperately ill young German men, Hugo Richter and Dr Friedrich Unger.<sup>10</sup> The pair had given up hope of a cure in Bremer's sanatorium. At this time there were only a couple of places for visitors to stay in Davos and they were open in summer only. The two persuaded the owner of the Strela, who was also a farmer and a vet, to open his summer accommodation just for them. They had taken a great risk travelling by sleigh through the snow to reach Davos and the care of Dr Spengler. The two were really very ill and struggled to walk into the house. However, they were not made welcome. Food was in scarce supply in winter and provisions had to be brought from Chur. Their rooms in the hotel had to be specially opened up and heated. Unger and Richter were accustomed to the rest cure of the sanatorium they came from and continued this routine. Although there were no balconies or reclining chairs in Davos at this time they improvised by lying outdoors on large sledges. This was not just the beginning of the altitude cure in Switzerland but also the start of winter tourism in Davos.

Both Unger and Richter recovered and publicised their experiences, staying on in Davos as entrepreneurs in the emerging *Kur* business in the village. Richter married the daughter of the owner of the Strela and took on its management for a while. He was more interested in the book trade and publishing and helped spread the word about Davos through the publication of literature about the village. He had his own printing press and produced the local newspapers. He was a founder of the secondary school in Davos in 1881, the *Kurverein* (tourist organisation), the local section of the Swiss Alpine Club and many other groups. Unger too, contributed to the continued establishment of

Davos as a cure resort. He pursued his medical career in the village, serving the *Kurhaus* and other patients.<sup>11</sup>

Soon after Unger and Richter arrived at the Strela they were joined by another two health seekers, the Charpentier brothers from Russia. They regularly met to play cards at the Strela, the beginning of entertainment in the resort. The following summer of 1865, the little community was enlarged by the addition of Nikolaus Kern and a banker from Basle, Friederich Riggenschach with his sick daughter. Sadly the girl died that same year. More sick people joined them in Davos and by the winter of 1866/67 there were fifteen of them.<sup>12</sup>

In May 1867, a wealthy Dutch banker, Willem Jan Holsboer, a resident of England, arrived in Davos with his terminally ill consumptive wife. They had come on the advice of her London doctor who had read about the health claims of Davos. After his wife's death the grieving Holsboer remained in Davos where he was remarried to the sister of the nurse who had cared for his wife. He too was to play a major role in the development of the resort. Spengler had been trying slowly to create his own clinic and accommodation for tuberculosis patients but lacked adequate finance. Holsboer provided the capital to build a specially designed *Kurhaus*, the *Kuranstalt Spengler-Holsboer* which opened in 1868.<sup>13</sup>

To be cured patients needed self-discipline in order to subject themselves to a rigorous regime, a combination of nourishing and fortifying diet, rest in the open air even in the coldest weather and exercise according to physical capacity. A guide to Davos written in 1876 told its readers:

*Davos demands qualities the very opposite of the resigned sentimentalism in which too frequently the phthisical youth or maiden was encouraged. Here is no place for weak and despairing resignation; here you are not pusillanimously helped to die, but are required to enter into a hard struggle for life. The combat is frequently a tough one. Days, weeks, months, sometimes years of obstinate self-denial and self-sacrifice are required ere the desired result is attained. But attained it will be, if body and spirit work hand in hand and cheerfully assist the grand, simple remedies offered by nature to her ailing sons and daughters.*<sup>14</sup>

In his treatments, Spengler incorporated some aspects of the milk cure when he began to receive patients for high-altitude cures from the 1860s.<sup>15</sup> In the routine of the *Kurhaus*, patients got up at 6.00 in the morning, The first thing they did was drink two glasses of cow-warm milk in the *Milchhalle* next to the *Kurhaus*. Then they went for a short walk before breakfast after which they had another walk. At 10.00 they went back to the *Milchhalle* for the prescribed quantity of milk. Then patients relaxed by reading or writing letters until lunchtime at 1.00 when they ate meat and vegetables accompanied by Veltliner wine. After that it was time to rest, either lying in the open air or in their room by an open window until 4.00 pm when milk was drunk again. The patients then went out of doors again until it was time for the evening meal.

It wasn't long before the number of visitors was increased not just by invalids but by their healthy companions. As numbers increased so did the range of accommodation available to them. Invalids and convalescents were recommended to take exercise and the healthy needed amusement while their sick companions were resting. As they stayed in the Alps for months or even years on end, activities and amusements were needed to keep them occupied and to break the monotony. The first outdoor activity, other than walking and sleigh rides were ice skating on the frozen lakes and sledging.

The first *Kurhaus* of Spengler and Holsboer was short-lived. It was destroyed in a fire in 1872. A company of cure-guests and their families and supporters, led by Friedrich Riggerbach, financed a new *Kurhaus* which was completed in 1873.<sup>16</sup> It was bigger than the original. More privately owned villas and chalets grew up around the new *Kurhaus*. Restaurants, a theatre, conversation rooms and covered walk-ways and promenades began to change the Davos landscape. During stays of many months or even years, cure seekers and their families and friends who visited them or accompanied them sought amusement and entertainment. As a consequence, as well as a health centre, Davos grew into a pleasure and sports resort.

In 1882, the German scientist, Dr Koch, with one of Alexander Spengler's sons, Karl in his team, was able to identify the TB bacillus. Once it was proved that TB was a communicable disease it seemed to make sense that sufferers should be isolated in remote mountain sanatoria.<sup>17</sup> The discovery made people realise the importance of hygiene and sanitation. As it was now known that TB was

contagious it was imperative that high standards of hygiene were adopted. Bedding was boiled and bleached during laundering and floors and furnishings, kept to a minimum, were kept clean and disinfected to prevent infection. Spitting onto the ground was forbidden and patients had to carry a flask for their bloody sputum, a characteristic feature of TB. These enhanced hygiene precautions contributed to modern Switzerland's reputation for cleanliness. The relative isolation of alpine health stations seemed sensible. Despite the concentration of people suffering from the disease in Davos, Arosa or Leysin, a person was less likely to catch TB in one of those resorts than they were in many of the cities of Europe. Evidence from Arosa suggests that death rates for tuberculosis were lower in the health resorts, despite the concentration of sufferers there, than they were in Switzerland as a whole. For example in Arosa the death rate was 7.1 deaths per 10,000 compared with 13.8 per 10,000 across the country for the first third of the twentieth century. However, sanatoria only accepted patients in the earlier stages of the disease who stood a good chance of being cured.

Towards the end of the nineteenth century, the first 'closed' sanatorium appeared in Davos. This was opened by Dr Karl Turban in 1889.<sup>18</sup> In the closed sanatoria that appeared not just in Davos but also in Arosa and Leysin, the cure routine was followed strictly. A typical sanatorium timetable would be 7.00 am get up, first breakfast, walk for half to one and a half hours, depending on physical strength, then *Liegekur* – lying in the balcony for a couple of hours: at 10.30 there was the second breakfast followed at 11.00 by a short walk; between midday and 1.00 pm when lunch was served there was another *Liegekur*. In the afternoon came the main *Liegekur* session until about 4.00 pm when there was another walk for an hour or so followed by yet another *Liegekur* from around 6.00 pm until supper at 7.00. More rest followed in the evening when a glass of milk was provided before bedtime at 10.00 pm.<sup>19</sup>

Milk was still an important part of the cure. From the early twentieth century, *Kur-Milch* was advertised in the Davos press as being prepared using the scientific principles developed by Dr N Gerber of Zurich. Milk came from cows under veterinary supervision, with high standards of hygiene in the cowsheds and milking stalls. Laboratory control in preparation guaranteed the milk's freedom from tuberculosis, diphtheria, scarlet fever and typhus. This was

probably due to the discovery that TB was caused by bacillus infection and that these microbes could be present in milk. Also in cities, milk was a far from healthy product, often adulterated and contaminated. Water added to thin it down also introduced bacteria and potential disease. Advertisements appeared in the tourist press for 'Milk for the cure – free from all germs'.<sup>20</sup>

In 1903 there were nine closed sanatoria in Davos, including the luxurious new art nouveaux Schatzalp, separate from the 22 hotels 19 Pensions and 31 houses offering rooms to rent.<sup>21</sup>

Arosa developed as a centre for health seekers from the 1880s, influenced by the experience of Davos as a resort for both cures and sports. Things in Arosa were on a much smaller scale than in nearby Davos. To become a centre for open-air cures for TB, villages needed to be above around 1,600 metres above sea level at which height it was believed the microbes could not survive, be sheltered from winds and preferably south-facing for maximum sunshine.

A visit to Davos inspired Dr Louis Secretan to create similar facilities in French speaking canton of Vaud.<sup>22</sup> He chose the area of Feydey, above the village of Leysin, where the geographical situation was seen as excellent. Any fog lay below the village, at between 1,300 and 1,500 metres in altitude. The promoters of Leysin as a medical centre were reluctant to call their establishments 'sanatoria' and so the most exclusive of them was called the Grand Hotel. Building began in 1890 and the project was completed in 1892.<sup>23</sup> Treatment for patients in the *station climatérique* of Leysin followed similar programmes to that in Davos and Arosa, offering the hope of a cure to health seekers while avoiding contamination of others. Previously French speaking consumptives had gone to traditional hotels on the shores of Lake Geneva, where the healthy and sick with various diseases mixed together, at great risk of spreading infection.

In the village of Leysin, the community's timetable revolved around the cure and its needs. The environment was kept calm and quiet, to the extent that during the rest periods everything in the village stopped. The timetable was strict and the meals simple. To allow easy cleaning and disinfecting, rooms in sanatoria were minimally furnished. As the sanatoria in Leysin were founded a little later than those in Davos, right from the start there was awareness that

TB was contagious and precautions were taken. Two systems of treatment were attempted. The first was to kill the bacillus, the other the traditional open air cure where the body was strengthened and helped to fight the illness itself. This second treatment was characterised by prolonged stays in the open air. Patients spent most of their days in the open air, covered by blankets in winter. Windows were kept open during the night. Food was nutritious and fortifying to complement the treatment. They were served appetising meals to tempt them to eat plenty. Meat and above all milk were important elements of the diet designed to build up patients.

Not all tuberculosis affects the lungs but other parts of the body, including the bones, and symptoms could include external lesions. In the nineteenth century it was thought that these were localised infections that could be cut out like tumours and so they were surgically removed. This form of the disease was therefore termed *chirurgicale* or surgical tuberculosis. However, this did not cure the disease but led to secondary infections, mutilation and scarring.

In Sameden, near St Moritz, Dr Oscar Bernhard looked to the healing power of the sun to cure surgical tuberculosis. He is alleged to have been inspired by seeing meat preserved by being hung out in the sun to dry. A similar theory had been applied centuries before in the Middle East and more recently experimented with in Lyon.<sup>24</sup> Utilising the long hours of sunshine with its additional intensity due to the high altitude, Dr Bernhard opened a clinic in St Moritz for patients suffering from surgical, bone or osteo-tuberculosis. Patients lay in the sun with diseased parts exposed to the sun's supposed healing rays. He called his treatment innovation 'heliotherapy' and for him it was an auxiliary to surgery. After an operation the affected area of the body was exposed to the sun.

Inspired by Bernhard and Spengler, Dr August Rollier opened his own clinics in Leysin, specialising particularly in heliotherapy but also incorporating the fresh air altitude cure. For Rollier, the treatment had to be general and not localised. This was so that sunlight could stimulate the body's natural defences. 'The air and sun bath judiciously applied, stimulates the appetite and digestive functions and renews energy'. Rollier emphasised that the mountain environment could increase the number of red corpuscles in the patient's blood.<sup>25</sup> He was also keen on the photographic representation of his ideas in

practice. He published many works featuring before and after pictures of his patients to promote his clinics. Rollier extended the sanatoria treatment to patients beyond the wealthy elite by creating colonies where patients could work to pay their fees. Being outworkers in light industry allowed them to contribute to the cost of their care. At the *International Clinique Manufacture* and at *l'Abeille* for those convalescing, small workshops were provided where patients could work as well as facilities adapted to allow the bedridden to work from their beds while lying in the sun.<sup>26</sup> There were also sanatoria funded by the Vaud cantonal government, the *Sanatorium des Alpes Vaudoise*, Fritz Moran's *Société de l'Asile de Leysin* and the *Sanatorium Populaire* funded by Nestlé.<sup>27</sup> According to Rollier and his followers, the work cure helped patients' with the psychological problems of loss of occupation, separation from home and dependants and the loss of esteem associated with becoming an economic burden to their families.<sup>28</sup> Patients working in their beds lay on their front in a ventral position to work which was deemed to allow them to work long hours without tiring, assisted digestion, strengthened the abdominal muscles and caused the shoulders to be held back, enlarging the thorax.<sup>29</sup> According to Rollier, this was the natural way to lie.

For children judged to be at risk of developing tuberculosis, Rollier opened Les Esserts, a 'preventarium' where the youngsters, dressed only in knickers and sunhats, spent all day in the sun, doing lessons and exercise, even in the snow. There was also an agricultural colony for children where young people were instructed in outdoor farming activities, work which contributed to the costs of their treatment and provided them with training in skills that would later allow them to earn their livings in a healthy environment in adult life.<sup>30</sup>

By the beginning of the twentieth century the treatment of tuberculosis in Davos and Leysin reached industrial proportions. Communities where they were situated adapted to the needs of the sick who followed strict regimes. In Leysin this meant the whole village had to adapt its schedules to fit in with the routine of the cure, for example taking breaks from work to ensure silence during the patients' rest periods. In the resorts the climate was the key to healing success for TB sufferers. As well as the high altitude, low density of oxygen and dryness of the atmosphere, they faced south for maximum daily sunshine in every season and were sheltered from the worst of the cold winds

by the surrounding mountains and so not every alpine village was suitable. The dry atmosphere was believed to have healing properties. These qualities made any regime followed by the patients more effective than the same treatment carried out in the lowlands. In the absence of any effective drug treatments, medical climatology and its offshoots offered some hope of recovery. However, patients had to remain in the mountains for a long time, making any treatment expensive as well as time consuming. This changed in the 1940s with the development of antibiotics that could treat the disease in weeks rather than years. This new treatment was available anywhere, it did not depend on the patients' being in the mountains for years, providing they were rich enough to do so or on their own self-discipline. TB could now be cured anywhere and treatments were open to all, not just the wealthy. This saw the end of the old sanatoria which had to close down or adapt to new uses.

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<sup>1</sup> Susan Barton, *Healthy Living in the Alps: The origins of winter tourism in Switzerland, 1860-1914*, Manchester University Press, 2008, p.7

<sup>2</sup> Barton, p. 10

<sup>3</sup> Thomas Dormandy, *The white plague – a history of tuberculosis*, London and Rio Grande, 1999

<sup>4</sup> Dormandy

<sup>5</sup> Margrit Wyder, *Kräute, Kröpfer, Höhenkuren, Alpen in der Medizin - Medizin in der Alpen*, Zurich, 2003, p. 92

<sup>6</sup> Jules Ferdmann, *Der Aufstieg von Davos*, Davos, 1945, second edition, 1990, pp. 34-35

<sup>7</sup> Barton, pp. 6-7

<sup>8</sup> Ferdmann, p. 16

<sup>9</sup> Ferdmann, p.41

<sup>10</sup> Ferdmann, p. 50

<sup>11</sup> Ferdmann, p.54

<sup>12</sup> Ferdmann, p. 60

<sup>13</sup> Ferdmann, pp. 60-61

<sup>14</sup> J. Weber, *Illustrated Europe – Davos*, London, Zurich and Paris, 1876, p. 27

<sup>15</sup> Ferdmann, pp. 62-63

<sup>16</sup> Ferdmann, p. 54

<sup>17</sup> Barton, pp. 14, 33

<sup>18</sup> Barton, pp. 13, 22

<sup>19</sup> Barton, p. 10

<sup>20</sup> *The Davos Courier*, 12 December 1903

<sup>21</sup> *The Davos Courier*, 2 January 1903

<sup>22</sup> C.W. Domville-Fife, *Things Seen in Switzerland in Winter*, London, c.1925, p. 118

<sup>23</sup> Liliane Desponds, *Leysin, histoire et reconversion d'une ville a la montagne*, Yens-sur-Morges, 1993, p. 22

<sup>24</sup> Auguste Rollier, *The international factory clinic for the treatment by sun and work of indigent cases of 'surgical' tuberculosis*, Lausanne, 1929, p. 4

<sup>25</sup> Rollier, p. 5

<sup>26</sup> Barton, pp. 80, 83

<sup>27</sup> Maurice André, *Leysin, station medicale*, Pully, 2002, p. 22. Richard Hobday, *The Healing Sun, Sunlight and Health in twenty-first century*, Scotland, 1999

<sup>28</sup> Rollier, p. 5

<sup>29</sup> Auguste Rollier, *Quarante ans d'heliotherapie*, Leysin, 1944, p. 147

<sup>30</sup> Rollier, p. 5