Nomination of

The GREAT SPAS of Europe



for inclusion on the World Heritage List



2b) History and development

2.b.1 European spa culture, and the history and development of *The Great Spas of Europe*

Introduction

Section 2.b.1 is an overview of the history and development of *The Great Spas of Europe* regarding the nominated property as a single entity. It is divided, by chronology, into:

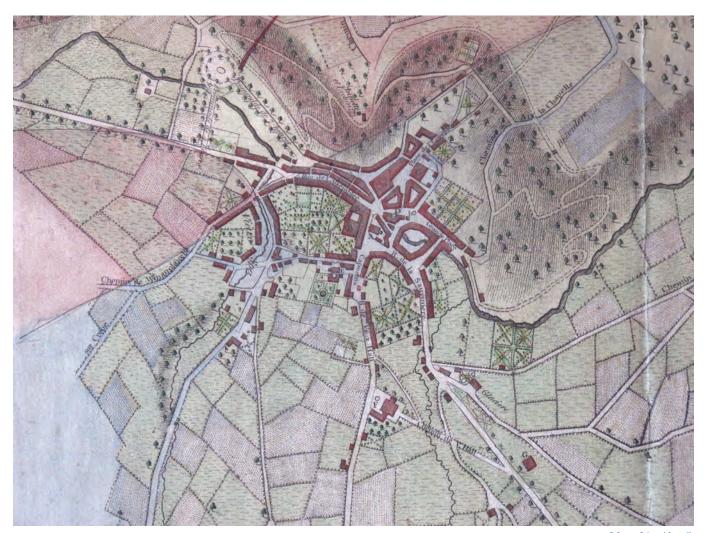
Early history, to around 1700; From around 1700 to the 1930s; From the 1930s to the present.

The history and development of individual component parts (1-11) is described in section 2.b.2.

Nomenclature

Mineral and thermal springs are natural sources where their waters have circulated underground, commonly along fault lines or in the vicinity of active volcanic environments, and often for very long periods of time. These waters undergo changes in composition due to heat, pressure and time, and by interaction with the surrounding rock (and mixing with inflows of other water, gases and various elements). At surface, such waters, enriched with minerals and often at a high temperature, may be deemed to be beneficial under various hydrotherapeutic regimes and are used for medical and tourism purposes worldwide. The World Health Organisation defines medicinal mineral water as "water bacteriologically uncontaminated that proceeds from a natural or perforated subterranean source and that contains a determined mineralisation that can induce favourable health effects." The use of mineral waters must be valued according to their physical and chemical properties, and their accessibility.

In Europe, such use is manifest most prominently in the European spa phenomenon. This is set apart from the thermalism traditions of the Orient (hammam), Japan (onsen) or Scandinavia and Russia (sauna/banya) by its basis in balneotherapy. Innovation in medical diagnostics, corresponding urban planning, and spa architecture took place on an international scale. Changing medical advice determined the management and promotion of the spa towns, and they responded to developments in medical science by introducing specialised treatment rooms and new buildings, combined with other features dedicated to recreation and pleasure.



Map of *Spa* (detail), 1787 by Dr. Ash

The term spa must be defined in order to avoid confusion with other facilities and resorts where water is also used for baths, cleansing, general hydrotherapy and other procedures. The origin of the word is believed to be the Latin sparsa fontana (= "gushing fountain"). Various other suggested derivations may be encountered in literature, such as the Latin spagere (= "to sprinkle, moisten"), sanitas per aquas (Latin phrase = "health through water"), and even espa (Walloon = "fountain"). Popular use of the word comes from the name of the town of Spa, Belgium, nominated as a component part of The Great Spas of Europe, and known during Roman times as Aquae Spadanae. In the Middle Ages, the Ardennes were evangelised and Spa became celebrated for the curative properties said to be obtained by drinking the waters from the main spring called le Pouhon (today's Pouhon Pierre-le-Grand). This spring appears in The view of Spa, by Gilles Pierriers, published in 1559. In sixteenth-century England, the old Roman ideas of medicinal bathing were revived at towns like Bath. In 1596 William Slingsby, who had been to Spa on a Grand Tour of Europe, discovered that water from a chalybeate spring (Tewit Well) in Harrogate, Yorkshire, possessed similar properties to that from Spa. Harrogate was the first resort in England for drinking medicinal waters and was called the English Spaw. This started the English use of the word spa as a generic description.

There is a range of definitions of the word spa in different sources: Spring or resort with thermal or mineral water used for drinking and bathing (*Encyclopaedia Britannica*); A mineral spring considered to have health-giving properties / A place or resort with a mineral spring / A commercial establishment offering health and beauty treatment through such means as steam baths, exercise equipment, and massage / A bath containing hot

aerated water (Oxford Dictionary); A place with access to natural hot springs used for therapeutic and/or recreational purposes (A Dictionary of Public Health, 2007); A spa is a location where mineral-rich spring water (and sometimes seawater) is used to give medicinal baths. Spa towns or spa resorts (including hot springs resorts) typically offer various health treatments, which are also known as balneotherapy. Such practices have been popular worldwide, but are especially widespread in Europe and Japan (Wikipedia, the online free encyclopedia). As follows from these sources, the principal feature of spas and spa towns is their proximity to curative mineral springs.

The usage of the word spa has, however, changed over the years. Although the original, centuries-old, usage continues (referring to a place where there is a mineral spring producing water with curative properties), spa is now also becoming a generic word for the health and fitness area in a hotel or resort with no mineral springs. Throughout this nomination dossier the term spa or spa town is used in its original meaning, referring to a specialised town centred on hot or cold curative natural mineral springs which grew and was adjusted regularly to respond to developments in medical science and to satisfy the demand of its visitors for cure and leisure activities.

Early History, to around 1700

Everywhere in many lands gush forth beneficent waters, here cold, there hot, there both... in some places tepid and lukewarm, and promising relief to the sick...

The global use of thermal and mineral springs has a heritage that spans thousands of years. Archaeological evidence suggests that most thermal mineral waters have been used from the earliest times; perhaps variously for medicinal, spiritual and religious use.

Artesian thermal springs that issue naturally from deep within the earth, often bubbling with gas and seemingly of their own will or that of higher powers, were likely features of considerable intrigue. The waters of mineral springs are often: strange in colour (or at least they deposit coloured minerals such as orange iron hydroxide ochre, or terraced "frozen waterfalls" of cream-coloured porous travertine and tufa); odorous (whilst sulphur dioxide has a pungent smell, the familiar 'rotten egg' smell of hot springs is the result of bacteria that feed off sulphides, producing hydrogen sulphide); very hot, accompanied by rising steam, especially in winter; bubbling with gas; and of variable taste.

Mesolithic artefacts have been found near springs at City of Bath, Františkovy Lázně and Spa, whilst Neolithic remains have been found close to the springs at Baden bei Wien.

Indus Valley civilisations (3000-1700 BCE), located in present-day Pakistan, are likely to have used the abundant thermal springs that may still be found in use today. The Hittite Empire (around 1600-1178 BCE), in Anatolia (present-day Turkey), are said to have used thermal springs for therapeutic and recreational purposes; an even more ancient forerunner of hammams than the Romans. The people of Jordan, Iraq and Israel are also said to have used hot springs for therapy and recreation. There is evidence that the Chinese probably used the Huaqing hot springs (25km east of Xi'an) from perhaps 1000 BCE. They were incorporated into the Huaqing Palace built in 723 CE during the Tang dynasty. In Japan, onsen on Shikoku Island may have been used from around 700 BCE.

Pliny the Elder (23-79 CE, Roman author, naturalist and natural philosopher, who travelled to hot springs in Germany, including Baden-Baden, Wiesbaden and Aachen).

There is evidence that the Etruscan civilisation (from 800 BCE) used the thermal spring water at Montecatini Terme; and in Pompeii geothermal water was supplied to baths. In classical Greece, bathing in Homeric times was primarily used for cleansing and hygiene, but by the time of Hippocrates (460-370 BCE) it was considered healthy and beneficial for most diseases (he used thermal balneotherapy in his Askleipion in Kos). Greeks put emphasis on physical exercise where bathing was complementary to it, the baths being often combined with an initial exertion in sport - the precursor of the gymnasium. This was followed by bathing, perspiration, massage and walking. Greek temples and baths were related closely to the surrounding landscape. Classical Greek authors that mention mineral and thermal springs also include Plato (427-347 BCE, one of the world's best-known and widely studied philosophers) and Aristotle (384-322 BCE). During the Iron Age, Celts worshipped deities associated with rivers and streams, and natural hot springs but, for the most part, whilst they honoured these sources, they built their settlements on high ground away from river valleys and the springs. The thermal springs located in the City of Bath are associated with the legend of Bladud, father of King Lear, who was cured of leprosy by immersion in the hot springs somewhere around the eighth century BCE. The springs are thought to be the site of the Celtic pagan worship of the goddess Sul, and were subsequently the site of the Romano-British worship of Sulis Minerva, a nourishing and life-giving mother goddess. The Romans named the bathing complex, that included temples by 70 CE, Aquae Sulis.

Although heavily influenced by the knowledge of the Etruscans and the Greeks, the Romans developed and applied thermal balneology for therapeutic and social purposes in a systematic and large-scale manner. Roman baths were associated directly with urbanism, and diligent record-keeping shows their dominance in the spread of the Roman Empire. Those mineral and hot water springs in the thrall of the Empire attracted the interest of the Imperial administration, particularly where there was a military presence in newly-conquered lands. Initially, thermal baths were reserved for the rehabilitation and treatment of the military, but subsequently bathing came to define a civilian as Roman, and urban, so that bathing came to be important as an essential Roman social activity. In places throughout the Empire, massive bathing and cultural complexes, thermae, were built. Bathing was the principal activity and was primarily a social activity with everything else secondary to it. These large public ensembles embraced a broad range of public activities, gradually becoming cultural institutions for socialising and entertaining. With time, though they became less important for cleansing, Romans still took extensively to medical spa treatment, including thermal bathing together with drinking cures involving excessive quantities of mineral water. Coincident with the general deterioration of morals, the baths became places for pleasure, including centres for various sexual practices.

Roman remains and structures have been found in former Roman imperial towns located in several component parts of *The Great Spas of Europe*. In the *City of Bath* (Rome's *Aquae Sulis*), the best-preserved ancient baths and temple complex in northern Europe constitutes a major visitor attraction (and lies at the core of eighteenth and nineteenth century developments). In *Baden-Baden* (Rome's *Aurelia Aquensis*), several Roman baths were discovered in the nineteenth century, and close to the Friedrichsbad (beneath the Römerplatz) the archaeological remains of the Soldiers' Baths are open to visitors.

The Circular Bath in the Roman Baths in the *City of Bath* was built in the second century AD.



In Bad Ems, whilst evidence for use of the springs is elusive (the springs formerly emerged in the river bed), the Upper Germanic-Rhaetian Limes (former frontier of the Roman Empire between the rivers Rhine and crosses the River Lahn. Germany's oldest reconstruction of a Roman watchtower (1874) forms a conspicuous landmark on a high hill that overlooks the spa town, adding to its picturesque setting and being floodlit at night. The Romans certainly knew of the Spa area: it was cited by Pliny the Elder (23-79 CE, Roman author, naturalist and natural philosopher) who assigned different properties to different types of water, together with indications as to their curative potential. Baden bei Wien was ImperialRome's Aquae Cetiae or Thermae Pannonicae, whilst Vichy was Aquae Calidae ("hot waters"). Karlovy Vary is also associated with Roman evidence. In such places, it is clear that the mineral water springs were of such significance that they generated Roman topnyms that persisted; much like the later geographically-variant toponyms (both prefixes and suffixes) such as bad and baden (Germany), vary and lázně (Czech Republic), and terme and bagno (Italy). There is various evidence of many of the springs having being used for recreation, religious and, perhaps, medical purposes.

The archaeological remains of other Roman spa towns, together with still-flowing springs, are to be seen in a number of places, including Wiesbaden (Aquae Matticae, Germany) and Aachen (Aquae Granni, Germany), Baden (Aquae Helveticae, Switzerland), Aix-les-Bains (Aquae Gratianae, France), Chaudfontaine (De Calida Fontana, Belgium), Teplice (Czech Republic), Baile Herculane (Aquae Hercules, Romania), Budapest (Aquincum, Hungary), Bagno di Romagna (Italy), Kyustendil (Bulgaria), Archena (Spain) and Chavez (Aquae Fluviae, Portugal).

The Middle Ages

The fifth century CE witnessed the end of Roman Imperial rule and the rise of Christianity. The disintegration of the Roman Empire led to the decline of spa activity but the Roman bathing tradition was not forgotten. The traditions of Roman baths, especially the thermal type, were continued in monasteries by various religious communities. For instance, the order of St. Augustin of Hippo (354-430 CE) stipulated emphatically that the human body should not be deprived of access to bathing if it is required for maintaining one's health. Likewise, the order of St. Benedict of Nursia (approx. 483-543 CE) promoted the idea of cleansing. An ideal monastery was supposed to have a bathhouse and a frigidarium. Also, some elite classes, who were unaffected by church decrees, continued to use baths; in contrast to the general populations who were not only averse to bathing but commonly wholly abstained.

In general, Roman structures that had been built around the springs fell into disrepair, but the mineral and thermal waters are likely to have remained in use by the Romano-Celtic tribes and early Christian sects who occupied areas around such springs. Carolingian (late-eighth to ninth century CE) and Ottonian (951 CE onwards) renaissances retained earlier bathing traditions, for example Charlemagne (742-814 CE) enjoyed the healing effects of hot springs in the former Roman baths at his imperial seat in Aachen, Germany.

After the Romans left Turkey, although large numbers of Roman thermal baths were destroyed by war, earthquakes and neglect, the Roman bathing tradition survived in Byzantium (Istanbul) in the east. From here it was absorbed into, and then adapted by, muslim culture. Then, this bathing tradition was brought back to Western Europe by returning survivors of the Crusades; religious wars that were sanctioned by the Latin Church and aimed at recovering the Holy Land from Muslim rule (first series, 1095-1291). Especially aristocrats, and later on the municipal population, were increasingly interested in bathing. Bathhouses in the form of special structures for body cleansing were opened in many medieval towns in the twelfth and thirteenth centuries, often even in villages, in the form of special structures for wellbeing and healthcare. These were called "lazebna" in Bohemia and Badstube or Badhaus in Germany. Many towns also built separate steam baths. A new tradition of thermal spas emerged at that time. Development of the spa industry in locations with healing springs was initiated in the Middle Ages by various medical doctors who settled in such locations to be available for service primarily to high-class spa guests. This was the beginning of the development of a medical specialisation called balneology, which eventually completely transformed the spa locations.. Such doctors were primarily available for high-class spa guests. with healing springs was initiated in the Middle Ages by various medical doctors who settled in such locations to be available for service primarily to high-class spa guests. This was the beginning of the development of a medical specialisation called balneology, which eventually completely transformed the spa locations.

From the thirteenth century baths returned to public life, particularly in southern Europe under the influence of the Moors. Mineral waters were used in the late Middle Ages in settlements that clustered around the mineral springs, but these places cannot be held to be spa towns in the modern sense.

Three of the early spa towns in *The Great Spas of Europe* were enclosed by walls in the Middle Ages: *Baden-Baden*, *Bad Kissingen* and the *City of Bath* (Roman in origin, restored by Anglo-Saxons and later strengthened in the Middle Ages). A fortified settlement of Montecatini Alto was established high above the present spa town of *Montecatini Terme*. Walls and a tower survive, and are included within the nominated property as they, and the slopes of Montecatini Castello, represent a focal point that was later integrated into the design of the modern spa town's main axis, Viale Verdi.

Renaissance

Some European monastic houses had a healing mission. A few of their buildings, often inspired by the military hospitals of Roman legions ("valetudinaria"), lay outside of the monastic or convent ensemble. They provided an early form of a hospital or, more accurately, a hostel with accommodation for invalids rather than a medical building that we understand a hospital to be today. In some of the spa towns these early buildings survive. In *Baden bei Wien* the Bürgerspital that had been built in the sixteenth century provided accommodation and a nursing home. In the *City of Bath*, the Hospital of St John the Baptist, Catherine's Hospital

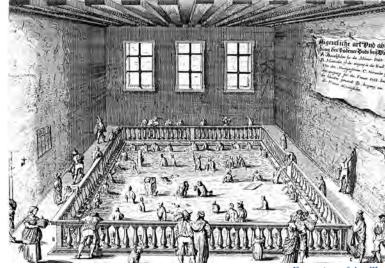
Bellots Hospital and the Leper Hospital survive from the twelfth, fifteenth and seventeenth centuries but now in new uses. They are evidence of hostels supported by a charitable foundation.

By the fifteenth century, accounts of bathing and early medicine indicate that medical values were being attributed to the water of some of the springs. With public bathing having earlier declined, the Renaissance saw the development of a preference for natural thermal mineral baths and for drinking the waters. Moreover, such activity was no longer spontaneous, or even a matter of empiricism, but was prescribed under medical direction by learned physicians, particularly in Italy.

The sixteenth century Bürgerspital. Baden bei Wien



The first attempts to analyse mineral waters were made at this time, and their curative effects on the body were defined in a clear authoritative fashion. One of the pioneers was Ugolino da Montecatini (1345-1425), a renowned physician from Montecatini Alto and so-called 'father' of Italian medical hydrology who later taught medicine at the University of Pisa. He is responsible for one of the first treaties on balneotherapy, in which the characteristics of Italian springs, particularly those at Montecatini Terme, together with their therapeutic properties are detailed in the ground-breaking Balneorum Italiae proprietatibus (1417), re-published in 1553 as De balneorum Italiae proprietatibus ac virtutibus.



Engraving of the The Herzogbad, 1649. Baden bei Wien

The first account of 'spas' in Central Europe is found in the verse lexicon of the German author and poet Hans Foltz (1437-1513), and dates from the end of the fifteenth century (published 1480, Nuremberg). Italian physician Michele Savonarola (1385-1468), one of the most famous doctors of the fifteenth century, made an account of the Tettuccio Thermal Baths in Montecatini Terme (published 1485). In 1553, an overview of literature on the medicinal use of water was published as *De balneis omniae* qua extant, whilst in 1571 Andrea Bacci (1524-1600), a doctor and natural philosopher at the University of Rome, published De thermis. In 1572, British doctor William Turner made a rudimentary estimate of the active ingredients in Bath's spa water and asserted that it contained brimstone, saltpetre and alum. He was the forerunner of a vast literature on British mineral waters.

Prunkbad, Neues Schloss. Baden-Baden

Spa culture developed in other parts of Europe, too, where, for the most part, treatments involved bathing in thermal springs. However, the massive spread of syphilis in the sixteenth century – as a consequence of bathing in large shared pools caused a gradual decline of this type of therapy. At that time, other European spas enjoyed a boom thanks to their acidulous mineral waters suitable for the drinking treatment. In this context, Spa in Belgium, Vichy in France and Pyrmont in Germany became very popular. One of the first Central European spa towns to experience such popularity was Karlovy Vary. In 1522, Dr. Wenzel Payer of Loket published the first book on Karlovy



Vary thermal waters (Tractatus de Termis Caroli Quarti Imperiori), where he recommended the local spring water for drinking in addition to bathing, thus expanding the treatment methods.

Drinking therapies became firmly established from the end of the sixteenth century and with them new approaches to medicine emerged. This was the beginning of the development of a medical specialisation that by the nineteenth century became to be called balneotherapy.

From around 1700 to the 1930s

Age of Enlightenment

After 1700, the spa industry began to determine the appearance and infrastructure of the spa towns. Everything became subordinated to the needs of spa guests. As bathing therapy made way for drinking treatment and its continued accompaniment of physical activity, new types of spa structures and new layouts of spa complexes were required. While life in spas had hitherto remained indoors or in the vicinity of common bathhouses, even though often in open-air conditions, now the sites experienced gradual development of free space, use of cool paths and shady alleys shielded from the sun, yet open enough to let the elegant visitors look around and be seen by others.

During the second half of the seventeenth century and in the eighteenth century, demand for social life inspired the founding of new spas as private enterprises of aristocrats and landowners in the region. Thanks to such initiatives and the presence of prominent guests, spas began to take over the role of summer residences for aristocrats and other prominent guests who expected such luxury and comfort as they were used to having in their own palaces and residences.

Orientation of palatial culture pushed into the background the hitherto preferred interest in one's health. Instead, preference was given to entertainment and ostentatious representation. Aristocratic clientele arriving

Kurhaus. Baden-Baden

every summer was no longer seeking physically demanding bath treatments – on the contrary, they wanted to have fun. Thus, although the primary purpose of many newly-built structures was of medical nature, the purpose of many others was to entertain the guests and to "protect them against boredom". Even the theatres and ballrooms were designed and built for seasonal use. It was not until after 1700 that more experienced builders and architects were commissioned to design and build them.

In the eighteenth century, the appearance of spa complexes began to reflect a systematic and conscientious application of the principles of the architecture and urban concepts of that period. Mineral springs were included into the palatial hierarchy of residences, follies, hunting lodges, gardens, alleys, and landscaped countryside. Likewise, the setup of spa locations followed the principles of the Baroque axial composition, for example in *Bad Kissingen* (1737-39).

During the eighteenth century, spa therapy began to be concentrated into large complexes called bathhouses. In the francophone environment, these houses were called "Établissement des Thermes", in Italy "Stabilimento", in German-speaking countries Badehaus, Logierhaus or Traiteurhaus. The spirit of the culture of The Enlightenment blended with the tradition of ancient baths.

From the end of the seventeenth century, enlightened thinking spread across Europe and to some European colonies in America. This is recognised primarily as a European phenomenon and is known collectively as The Enlightenment or the Age of Enlightenment. In certain American colonies, this centred on securing liberty, whilst in Europe it took different forms in different countries.

On the territory of today's Germany, the many princedoms and free cities in eighteenth century meant that Aufklärung ("Enlightenment") across the region was diffused and took on different forms in different places, where much depended on the beliefs of a sympathetic ruler, for example Frederick the Great (1712-86) in Prussia. Nevertheless, notable contributions with enlightened ideas came from some German Courts and universities. The approach of German intellectuals to metaphysics in general, and religion in particular, was different from French radicalism.

In Austria (covering at that time also areas of the present Czech Republic, Slovakia, Hungary and other Central European territories), Maria Theresa (1717-80) had initiated a comprehensive analysis of her Habsburg Empire's mineral waters as part of a policy to encourage bathing and improve the health of her subjects. Following her death, her son Emperor Joseph II (1741-90) endeavoured to bring forward reforms to strengthen the control of the monarchy. This included the licensing and control of spas and ensuring the training and licensing of medical health personnel. In the, then, vast Austrian Empire and Austrian Netherlands, his attempts at modernising his Empire, particularly with respect to legal reform, education, medicine and curbing the influence of the church, relapsed as the church reestablished its influence following his death.

Generally, the Enlightenment brought forward new empirical and rational thinking in sciences and, particularly relevant for spas, these included advances in medicine, analytical chemistry and geology.

The social and political development in Europe in the second half of the eighteenth century and in the beginning of the nineteenth century also caused changes in the popularity of European spa towns. Due to the war conflicts in the eighteenth century (War of the Austrian Succession, Seven Years' War, War of the Bavarian Succession), spas in Central Europe suffered a decline, whilst peaceful spas, especially the French and Belgian spas, moved into the forefront of visitors' interest. After the French Revolution, and as a result of Napoleonic wars, the French and German spas saw a decline ensued by growing popularity of relatively safe spas in Central Europe. These included Karlovy Vary, Mariánské Lázně and Františkovy Lázně.

Spa towns now enjoyed large numbers of visitors, including crowned heads and aristocrats, as well as famous artists. Thanks to prominent guests from all parts of Europe, spa towns became centres of a highly pluralistic society which was built on Enlightenment principles.

Medicine

The Great Spas of Europe marks the greatest developments in the traditional medical uses of mineral spring water by Enlightenment physicians across Europe. The nominated property represents the largest, most dynamic and economically successful urban resorts, with a fashionable and internationally oriented dimension. They radically changed spa treatment and made significant progress in developing scientific principles of balneology, hydrotherapy, crenotherapy and other advances such as pioneering diagnostic medicine.

This had a profound impact on development of the towns and their popularity and economy as well as advances in a wider personal health and wellness phenomenon.

William Hoare's painting of 1767 shows the surgeon, Jeremiah Peirce and Doctor William Oliver with three 'patients' who represent conditions that could be treated at the General Hospital, *City of Bath*. Behind the doctors is a drawing of the hospital building



Hospitals

At the beginning of the eighteenth century enlightened thinking began to change the approach to medicine and the practice of healing. This attracted patronage from the elite who contributed to the foundation of special baths and accommodation for the poor. In *Karlovy Vary*, the first spa hospital for the poor had been established as early as 1531. In the *City of Bath*, the General Hospital, later known as the Mineral Water Hospital, was a product of enlightened thinking and was built from 1739. The building, and hospital, is one of the first of its kind as a 'National Hospital', and its construction demonstrated the support of enlightened patronage which brought the building and its hospital foundation into being and then ensured its continued management. This hospital is of world importance because of its role pioneering the discipline of diagnostic medicine. Although the King had offered a small contribution to the Bath hospital, other rulers and the elite elsewhere encouraged or brought forward baths, hospitals and accommodation for the poor. At the time of the Grand Duke Pietro Leopoldo, a hospital for the poor had been established in *Montecatini Terme*.

Known then as the Caserma, the building later became the Regio Casino. In 1276, the House of Merkenstein had gifted their estate to the Kleinmarianzell Abbey at Baden bei Wien. After its dissolution in 1792, a charitable sanatorium, the Wohltätigkeithaus, was established in 1825 by Emperor Franz on the property for deserving poor people.

A distinction can be made between accommodation for invalids intending to drink or bathe. Spa used some of the money earned from gaming to provide a hospice for the poor although this no longer exists. However, bathing in early spas was in shared pools or tubs and managers had become aware that wealthy or elite (fee paying) patients were reluctant to share a space with indigent patients.

To resolve this in France, special accommodation and arrangements began to be brought forward by the beginning of the nineteenth century. Vichy was one of the first French spa towns to introduce special baths for the poor. A civic hospital for the poor had been established by 1819 but it was only completed some ten years later. Here the administrative arrangements for the selection and admission of poor patients proved particularly burdensome so that few patients were able to take advantage of the arrangements. In Karlovy Vary, based on the principles of the sixteenth century hospitals for the poor, civic hospitals started to be established in the nineteenth century such as the Saint Bernard hospital (1806-09).

Analytical chemistry and geology

One of the most celebrated and pioneering physicians in Britain at the beginning of the eighteenth century was Dr George Cheyne (1672-1743). He worked in the City of Bath in the summer spa season and in London during the winter; until 1718 when he moved to Bath permanently. He recognised the qualities of chalybeate compounds found in Bath's mineral water and also became a proto-psychologist. Dr William Oliver (1695-1764) of the Mineral Water Hospital continued investigations whilst by 1758, Dr J.N. Stevens had published a treatise on the medicinal qualities of the water. Soon after, William Falconer had published an essay on Bath Waters in 1770 (republished 1772) and he published a second treatise on the medical effects of Bath Waters. By 1774, Dr Rice Charlton had conducted careful experiments to determine minerals in spa waters and at the same time he numerically analysed patient records to gauge the genuine efficacy of various treatments. From 1720 to 1780 Bath provided a meeting place for many enterprising and innovative medical practitioners. Their various studies of water had evolved to take an increasing scientific approach and were accompanied by clinical trials in the General Hospital.

They are of particular interest in three areas:

- 1) assessing the composition of the water;
- 2) correlating chemical analyses with medical use; and
- 3) studying the gases emanating from the water in the hot springs.

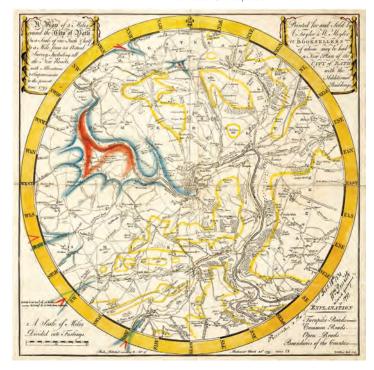
Whilst early modernity brought a new interest in the intensive use of mineral water in numerous spa localities, it was only around 1800 that the methods of quantitative analysis began to crystallise. Swedish chemist Joens Jacob Berzelius (1779-1848), considered one of the founders of modern chemistry, analysed the sources in Karlovy Vary, Mariánské Lázně and other spas, and his analytical methods rapidly diffused. The scientific basis

for balneotherapy was developed in the middle of the nineteenth century by Bohemian physicians Josef Loeschner (1809-88) and Eduard Hlawaczek (1808-79) of *Karlovy Vary*, and others, based on the relatively precise chemical analyses of mineral waters and accompanying gaseous components. Among the scientists who greatly influenced the understanding of the hydrogeology of mineral waters in Europe in the twentieth century are Ota Hynie (1899-1968) the founder of Czech Hydrogeology, Austrian geologist August Rosiwal (1860-1923) who produced geological maps of *Karlovy Vary* (1894/95, and of the Kingdom and countries constituting the Austro-Hungarian Empire), Karl Diem, Robert Kampe and others.

British theologian and scientist, Dr Joseph Priestley (1733-1804), who was historically credited with the discovery of oxygen in 1775, advocated using carbon dioxide to treat certain diseases. Working with Bath doctors, Dr Falconer and Dr John Nooth, they found a technique for dissolving carbon dioxide in water, thus inventing man-made carbonated water or soda water, thus paving the way for a bottling industry. From 1823 to the end of the nineteenth century, there were ten major studies in the composition of Bath's thermal water. Their increasing sophistication reflects progress made in the advancement in analytical chemistry, the studies being able to isolate ions of calcium, magnesium sulphates and chlorides; and to establish that earlier assessments were misguided in that the water was free from sulphur and bitumen. By the end of the century, the Bath doctor, Dr George Smith Gibbes identified the bubbles of Bath water contained nitrogen and oxygen as well as carbon dioxide.

In terms of geology, developments took place across The Great Spas of Europe due to the necessity of understanding the geology of the springs, of their catchments and of groundwater circulation processes. Scientific lecturer Dr. Wilkinson, who was working in the City of Bath and regularly addressing the public in the Kingston Lecture Room, published his analytical studies of Bath mineral water in 1811. Here he made the connection with the properties of the spa water and the geology through which it had passed. Also in the City of Bath, English geologist William 'Strata' Smith (1769-1839, "Father of English Geology"), outlined his order of strata in the vicinity for the first time and later drew, in his house, the first geological map of strata in 1799. He subsequently created, in 1815, the first nationwide geological map (Britain) influencing mapping and geological surveys around the world.

Geological map of Bath, by William Smith, 1799



Enlightened urban development

Some towns had grown 'organically' during the Middle Ages, that is, without an overall design, whilst some acquired precise orthogonal layouts. Following the spread of ideas that emerged from both the Italian Renaissance and the period of 'European Enlightenment', urban development from the eighteenth century introduced order into the fabric of towns.

Broadly, the form of the individual component parts of *The Great Spas of Europe* falls into two groups. In the first group, the spa function of the town remains concentrated



Map of Mariánské *Lázně*, 1821

closely around the springs, with a town gradually evolved alongside and around. Here an urban centre has been established, so that pleasure grounds and kurparks were introduced later on the edge of the original settlement. These towns include Bad Ems, Baden bei Wien, City of Bath, Karlovy Vary and Spa. The second group includes those towns that generally have a number of widespread springs, and here a spa 'campus' developed with parks and gardens closely integrated with spa buildings. This group includes Baden-Baden, Bad Kissingen, Františkovy Lázně, Mariánské Lázně, Montecatini Terme and Vichy. New developments were inserted into, or built alongside, earlier settlements.

After adopting classical architectural principles, the design of new buildings or the development of towns included plenty of newly designed free-standing symmetrical buildings of representative character. Values from Enlightenment thinking encouraged self-improvement and forged a new relationship between man and nature. This was applied particularly in spa towns, and produced a legacy of both tangible and intangible values.

During the first half of the eighteenth-century *The City of Bath* became the first of *The* Great Spas of Europe to develop large-scale ensembles of lodgings close to the springs with their baths, pump room and assembly rooms. Such accommodation was provided in elegant terraces, crescents, the Circus and squares, all blended with green spaces and fine prospects to the landscape. Spa treatments evolved on the basis of evidence and scientific authority, following meticulous record-keeping and early clinical trials. From the 1740s, pioneering work was being undertaken in diagnostic medicine. Diversions included lectures on emerging sciences and philosophy, but the resort became the most fashionable in Britain when it extended its offer. The combination of 'taking the cure' and what became legendary diversions was a winning one. Gaming was endemic throughout much of Europe and tables were available in the assembly rooms, coffee shops and pleasure gardens. To this offer was added assemblies (where 'marriage-match-making' for eligible girls and women became fashionable), theatre (which premiered performances before moving to the London stage), music and grand balls, and sex. Bath also offered an unrivalled freedom for women who could enjoy their own library and were free to use coffee houses with access to newspapers, journals and conversation. The City of Bath also became the 'home of the English Novel'; and many writers were successful women.

View of the Vaux-Hall at *Spa*, Antoine Le Loup, 1770



Spa followed the City of Bath; chronologically, and in many principal aspects of its development model. International recognition had already been established when Russian Tsar Peter the Great (1672-1725) visited to take the cure in 1717. Spa, too, had a distinguished reputation in spa science, the first work on its mineral waters appearing as early as 1559 (the first mention of mineral water export dates back to 1583). Its doctors became widely known in the eighteenth century, especially in England. But its first golden years began with the construction of the Redoute (1763), one of

Europe's earliest officially backed casinos (with assembly rooms and a theatre), and the Waux-Hall (1770) that was built outside the town and is now considered to be the oldest original casino building in Europe.

Bad Ems developed its springs, and its diversions. Organised gaming took place here, in the Conversationshall (of 1696), from 1720. This became one of the first casinos within the German states.

Illuminists in Italy secured some reform and enlightened thinking, but this was sporadic across differing autonomous states. Nevertheless, enlightened governance in Tuscany, encouraged by the Grand Duke Leopold (1747-92, hence the name of the baths in *Montecatini Terme*), brought forward judicial and fiscal reforms with investment in infrastructure projects. Beginning in 1773, these included draining marshes, channelling spring waters, creating hydropathic establishments and encouraging the development of *Montecatini Terme* as a spa. Developments snowballed across *The Great Spas of Europe*, at *Bad Ems, Baden-Baden*, and *Baden bei Wien*, at *Karlovy Vary, Mariánské Lázně*

and Františkovy Lázně, and in Vichy, Bad Kissingen

and Montecatini Terme.

Temples from Ancient Greece and Rome provided appropriate models, and the opportunity was to position new 'classical' buildings in an open landscape or parkland setting and free from the earlier urban context. Examples of this approach include the spa ensemble in *Baden-Baden*, the principal spa buildings in *Mariánské Lázně*, and the spa buildings in *Montecatini Terme*.

Engraving of the thermal baths, 1787. *Montecatini Terme*



The form and function of spa buildings: 'Spa architecture'

The spatial layout of spa towns, together with the form and function of spa buildings – 'spa architecture' – was heavily influenced by the nature of spa treatment. These, in turn, were governed by the properties of the springs and their waters. Most towns included several springs and some spas, such as at *Mariánské Lázně* and at *Montecatini Terme*, had several springs that issued water with different properties. Some waters, such as at

Baden bei Wien and City of Bath, included a cocktail of different salts and compounds. Different mineral waters, at different temperatures, include different chemical compounds and these are used to treat specific conditions, by bathing, drinking, and inhalation.

Drinking large quantities of water was a cure recommended by doctors in all the spa towns. Where drinking is the main treatment, pavilions, drinking halls, pump rooms, colonnades, parades and promenades were built close to the springs. Impulse to the construction of pavilions over the springs was given in the 1760s by physician and balneologist Dr. David Becher (1725-92) in Karlovy Vary who discovered the presence of rapidly vaporising carbon dioxide in mineral springs and recommended, therefore, that the mineral water should be drunk directly at the source.

At first, drinking took place in the open air or in small freestanding pavilions. Representative examples can be seen in Františkovy Lázně, Baden bei Wien, Spa and Vichy. Later drinking was organised within large purpose-built halls. In Bad Ems, a large hall, the Brunnenhalle (pump room), was built over several springs and is the present Kurhaus. Three pump rooms relate to each of the City of Bath's three springs and were places for drinking water. The new spa ensemble in Baden-Baden was built between 1825 and 1862, away from the sources in the medieval walled town, and drinking water was taken in a purpose-built 'trinkhalle'. The Trinkhalle is a drinking hall, designed for drinking mineral water provided



garden, 1838. Bad Kissingen

through purpose-made fountains (the trinkhalle contains no added diversions such as gaming). By the middle of the nineteenth century, some of the spas included very large drinking halls such as at the Temple Cross Spring at Mariánské Lázně and the Tettuccio Thermal Baths at Montecatini Terme, and these also offered a choice of different waters. In Vichy, a similar building is the Trinkhalle or Palais des Sources of 1897.

Pump rooms are located close to a spring for drinking and for meeting and socialising with other curists, for example in the City of Bath. In Bad Kissingen, the present pump room was built in 1910-12 over the Rakoczy and Pandur springs and is directly connected to the Wandelhalle, which is capable of administering to a large number of curists at a time. The integrated heating system allowed the extension of the spa season during winter.

Taking a stroll in the Kurpark, 1910. Baden bei Wien

In many spa towns drinking was undertaken in purpose-built colonnades such as in Františkovy Lázně, Karlovy Vary, Mariánské Lázně, Montecatini Terme and Vichy. Some smaller colonnades in some spa towns are essentially covered promenades.

For the drinking treatment to be effective, time and associated gentle exercise came to be part of the cure and an essential part of the daily routine for the curists. In the City of Bath 'parades' were built on a wide pavement in front of terraces and crescents. In Karlovy Vary and Mariánské Lázně colonnades were built within which curists could drink water as well as



promenade. Here fountains were included such as in the Mlýnská (Mill) Colonnade of 1871 and 1892 at Karlovy Vary and the Colonnaded Temple at the Cross spring at Mariánské Lázně. The ensemble of the Tettuccio Baths of 1781 at Montecatini Terme presents a triumphant essay of interconnected colonnades and fountains.

Where thermal bathing was on offer, at first this was undertaken in communal baths with examples at *Bad Ems*, *Baden bei Wien*, *City of Bath* and *Karlovy Vary*. By the end of the eighteenth century, gender privacy was in place in changing and treatment rooms. This had been introduced first at the *City of Bath* in 1789 in the design of the Hot Baths by John Wood the Younger, and then an extensive baths ensemble built at *Vichy* in the 1830s (but now gone). After this, the introduction of rooms for privacy was taken up in other spas.

The design of treatment buildings in some spa towns created very large palatial ensembles, for example the Friedrichsbad in *Baden-Baden*, the Luitpoldbad in *Bad Kissingen*, Nové lázně (New Spa) in *Mariánské Lázně*, and Císařské lázně (Imperial Spa) in *Karlovy Vary*.

Whether 'taking the cure' was by bathing or drinking, sociability was a key aspect of the daily spa itinerary. Several building types were developed to accommodate the needs and the preferences of spa guests: the Kurhaus is a large central spa building which includes a range of facilities for diversions such as gaming or conversation and was built over or close to a mineral spring, for example in *Baden-Baden*, *Bad Ems*, *Baden bei Wien*; the Kursaal is a conversation house with rooms for entertainment and diversions such as a theatre, reading rooms or a casino, for example in *Mariánské Lázně*, *Montecatini Terme*, *Bad Kissingen* and *Spa*; the Conversation House (Konversation Haus) is a large hall, usually for meeting but with reading rooms and libraries. As well as drinking as a communal activity eating together was a shared experience. The two early assembly rooms in the *City of Bath* provided communal breakfasts as part of the beginning of the routine of the day.

Architectural style, and a new approach to landscape

Baroque

A number of examples of Baroque architecture may be seen in *The Great Spas of Europe. Bad Ems* has some exemplars, including: one of the the earliest hotels in Europe, the 'house with the four towers' located in the Kurpark (late seventeenth century), where a number of European kings stayed and which Tsar Alexander II of Russia (1818-81) later made his unofficial summer residence; and the eastern wing of the Kurhaus (1709-25), which was originally designed to be a three-winged Baroque palace for the ruling family of the House of Oange-Nassau. In *Bad Kissingen* in 1738, the Würzburg court architect planned and oversaw the building of a Baroque Kurhaus, together with a garden laid out to complement it in both design and

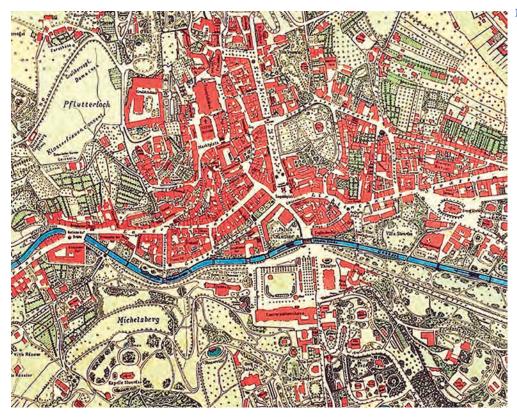
Vier Türme (Four Towers) House. Bad Ems



function – one of the earliest examples of a garden dedicated to cure purposes outside of a city. In *Karlovy Vary*, a number of Baroque bathouses have been preserved including the Maltese Cross Bathhouse (1706), the Peter Bathhouse (1706-09) and the House of Three Moors (1760). The Decanal Church of St. Mary Magdalene was also built during this period by a prominent Central European architect, K. I. Dientzenhofer (1737).

Neo-classical

Generally, throughout the eighteenth and nineteenth centuries, neo-classical styles of architecture were adopted for principal spa buildings such as baths, treatment rooms, conversation houses and assembly rooms. Classical designs were also related directly to nature, for example the crescents in the City of Bath which included in their design a promenade alongside an open space and a prospect to green hills beyond. Similarly, treatment centres in Baden-Baden, Mariánské Lázně and Františkovy Lázně are closely associated with a parkland setting. Some springs in Spa issue in the gently sloping woods above the town. Here pavilions were built over the springs and some reflected a 'classical' theme. At the same time, in the valley the town had grown haphazardly around the existing roads, paths, pouhons and streams. By way of a contrast, two interventions introduced designs with characteristics of order. The Waux-Hall of 1769-70, a neo-classical building by Liège architect Jacques-Barthelemy Renoz (1729-86), is one of the oldest witnesses to European gaming. Its exuberant interior has stucco by Antoine-Pierre Franck and ceiling paintings by Henri Deprez. It was built on the edge south of the then town with its gardens and promenades extending eastwards down a slope. In the floor of the valley, tree-lined promenades including the Promenade des Sept Heures were built extending eastwards away from the centre.



Map of Baden-Baden, 1889

Unlike the experience of medieval towns, an eighteenth century observer may easily walk around a new 'classical' building. The construction of the first Conversation House in 1765 below the old town of Baden-Baden in the valley of the River Oos illustrates the transition from the irregular architecture and character of the medieval walled town to the new architecture of the Enlightenment. Here the new building and its adjacent promenade in a landscape setting presents symmetry and order in contrast to the irregular character of the old walled town.

Similar ordered geometric development had been introduced outside the walls of the City of Bath in John Wood's symmetrical design of 1736 for Queen Square and his later development for the Parades ensemble of 1742. The Bath Improvement Act of 1789 enabled the very significant intervention inside the city walls when Bath Street of 1791 was cut through the disordered Jacobean fabric of the city thereby presenting a formal colonnaded retail street linking the Grand Pump Room ensemble with the Hot Bath and Cross Bath. This intervention was held to be an 'improvement' that was intended to enhance the economic attractiveness of the city and the spa offer.

The grand Duke of Tuscany Pietro Leopoldo ordered the building of the baths at *Montecatini Terme* from 1773 to 1783. These were built away from an earlier settlement and were built together with a wide avenue of elm trees. This axial promenade related the baths to the surrounding landscape and a focal point in the hill top town of Montecatini Alto, the avenue eventually becoming the basis of the present Viale Verdi.

In 1793 Františkovy Lázně received the approval of the provincial governor for the construction of a town to replace the earlier cluster of buildings that had become established around the then neglected springs of the earlier settlement. The small new town, which became the first spa in continental Europe specialising in treatments using mineralised peat, was laid out initially along a central axis (founded on Baroque principles of axiality and symmetry) within which the principal functions of the spa were concentrated. From the beginning of the nineteenth century the spa town was further expanded, based on the principle of ideal towns, to form a regular rectangular grid within which the principal functions of the spa were concentrated. Parallel streets were densely lined with Classicist, Empire and Historicist buildings in architectural unity.

To embrace the springs that had been discovered away from the centre, additional Historicist buildings were built from the 1860s, surrounding the park, at a time when the town flourished. Some springs were outside of the grid and these were incorporated in a sequence of inter-related parks and these effectively surround the initial urban development with a ring of open space.

As well as the introduction of buildings designed in a classical style, a new feature was the laying out of parades, colonnades and pavements as 'theatrical stages'. Here visitors could parade or promenade to meet each other and socialise in a park landscape or look out to open countryside and, in some cases such as the parades at the *City of Bath*, with extensive high pavements with classical buildings behind.

Similar interventions inserted new and ordered features into old fabric. In *Karlovy Vary*, formal and straight colonnaded pavements were introduced into the old town. The Mlýnská Colonnade of 1871 replaces an earlier wooden colonnade of 1811 and this, together with two later colonnades in the town, illustrate the introduction of symmetry and order.

An interesting example of a neo-classical colonnade is the Ferdinand Spring's Colonnade in *Mariánské Lázně* (1827) with a columnal gloriette in the centre to which two lower colonnades are attached. In *Bad Kissingen* is a representative example of the Rundbogenstil (round-arch style) is the Arkadenbau (1834-38) with the Kursaal, and a long arcade colonnade.

Biedermeier style

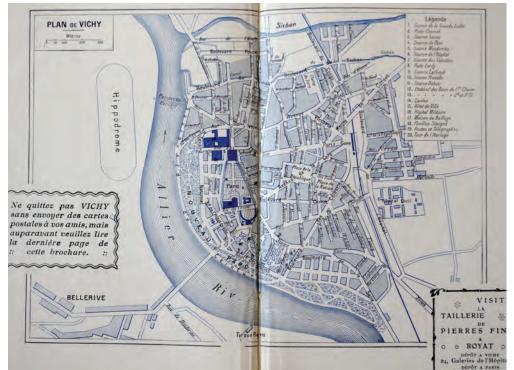
In post-Napoleonic Europe, between 1815 and the Republican revolts against European monarchies of 1848, several spa towns across central Europe introduced buildings in the

influential Biedermeier style that was popular particularly in German states and the Austrian Empire. Transitional between Neo-classicism and Romanticism, Biedermeier architecture is characterised by 'rigorous simplicity' and elegance at a time when the middle class grew in number and arts appealed to common sensibilities. Representative examples can be seen in town houses in *Baden bei Wien*, where members of the Habsburg family and the Imperial Court - and leading Viennese architect Joseph Kornhäusel (1782-1860; court architect to the Prince of Liechtenstein) - changed the appearance of the city following a fire in 1812. Similar buildings in the Biedermeier style were also constructed in *Karlovy Vary*, *Mariánské Lázně* and, in particular, *Františkovy Lázně* which can serve as an example of a spa town with a very well preserved classical and Biedermeier architecture.

Romanticism and landscape aesthetics

The architectural movement of Romanticism began in Europe during the late eighteenth century, coinciding with the later 'age of Enlightenment' and the early phases of the Industrial Revolution, and peaked roughly between 1800 and 1850. It was opposed to the excesses of the Baroque and its final expression of Rococo, and also sought beyond the functional aesthetics of widespread industrial architecture to more emotional, exotic and nationalistic aspects of European culture. Whilst it was intended to reflect the glorious past of nations, it also referenced nature's sublime beauty and European cultural openness to the world. Architecture in the Romantic period drew on a wide range of styles from a number of historical sources. This contributed to the character of the new architecture to be one of variety and surprise.

At the same time, appreciation of landscape aesthetics changed, the outlook of environmental radical Genevan Jean-Jacques Rousseau (1712-78) and humanity's relationship to nature forming a powerful current in the Romantic Movement. Informal landscapes were favoured over formal symmetrical and geometrical landscaped gardens that were the legacy of the Baroque. This lingers in the geometrical approach in the radial layout of boulevards stretching from the Établissement Thermal across the central Parc des Sources in *Vichy*. Nevertheless, the next essays in park design in the town differed from this geometric approach with informal layouts introduced in a sequence of parks along the left bank of the River Allier.



Street plan of Vichy, 1912

This informal approach informed the design of large kurparks in the 'English Garden Style' in most of *The Great Spas of Europe*. The extensive scale of the kurparks introduced a major feature of open spaces in all the spa towns. The Lichtentaler Allee at *Baden-Baden* was laid out by 1808 with an extensive park laid out from 1839. The central part of the Kurpark in *Baden bei Wien* (today the Lower Kurpark) was established in 1796, based on plans by Jean Baptist Barbé.

Spa buildings in *Mariánské Lázně* are arranged generally around a large central park at the end of a rising shallow valley. This was first laid out in 1815 by George Fischer in the style of French gardens and subsequently remodelled in 1819 by the landscape gardener Václav Skalnik to the English landscape style. His extensive landscaped park was then incorporated in a whole concept for the development of the town and, by the 1820s, the development of the small spa town had commenced. In 1830, as a response to the then stagnant economy, the Corporation in the *City of Bath* laid out the extensive Royal Victoria Park. This is one of the earliest urban parks of its kind in the United Kingdom and was conceived as a kurgarten intended to compete with European spas.

At *Bad Ems*, from 1839, a narrow formal garden and its promenade was laid out west of the casino. On the south side of the river, around a newly discovered spring, an informal design was adopted. This was for a large garden alongside the river associated with the Kurmittelhaus of 1853. Nearby, a line of large villas was extended westwards, built facing the river and extending up to the foothills of the Malberg.

Villas were introduced in all the spa towns and many of these buildings were substantial, and stood in their own spacious grounds. The impact of these villas was the same in all the spa towns and it brought independent and private buildings with large gardens around the old town so that the character of the periphery of the town changed. The buildings were brought forward in a variety of architectural styles and these ranged from severe and disciplined Grecian classical essays to picturesque styles in various forms. Some villas at *Bad Kissingen* were built from the 1820s at the new ring road going around the old city centre. In 1846 villas in the spa town were recorded by A.B. Granville as providing lodgings for visitors.



Villa Turgenew, Baden-Baden

In Karlovy Vary and Mariánské Lázně large villas were constructed in residential areas which were designed specifically for spa guests and housed also balneological facilities and medical offices. In Montecatini Terme villas were introduced in Guilo Bernadini's plan for the regeneration of the town and these were intended for the doctors and consultants working in the spa. From 1835, the first villa promenades were built between the settlement of Baden bei Wien and the Helenental valley to create an Arcadian spa landscape. The railway connection to Vienna was secured in 1842 making the town even more accessible for Viennese who built villas for vacations but also as permanent homes. New wide roads were constructed as avenues so that these, together with a series of parks, created a ring of villa districts that surrounded the old town. Most of the villas were rented during the season to wealthy spa guests.

The urban form of *Spa* is different from the other spa towns in the series. Here many of the springs lie outside the urban area so that the whole ensemble consists of a narrow settlement at the bottom of the valley with paths leading up through surrounding woodlands to springs below the high plateau. The town began with early buildings clustered informally around the 'pouhons' in the valley floor. The Mayor, faced with a possibility of a prohibition on gambling in the nineteenth century, commissioned a new suite of spa buildings thereby refocussing on new uses of water around a more formal planned development in the centre of the old town. In 1862, the 'Tour of the springs' was completed (a suite of new roads) that provided an easily accessible circuit of the more distant springs located in the woodland slopes overlooking the town. Sumptuous villas are also a feature of the woodlands both in the south and north of the component part.

Starting with Rousseau's sentiments of the return to nature and the medical practices of movement as a health-promoting treatment, patients often proceeded onwards into the natural surroundings outside the spa town. On a regular basis, the spa centres were linked to their natural setting of a cultivated landscape through many walking paths with garden restaurants, bowers, viewing-platforms or towers. Along the paths, admirers of the spas or curists would, as signs of gratitude, commission memorial plaques, wayside crosses, or even small chapels, often in settings ideal for prayer and quiet contemplation. All these efforts were to serve a single goal - to contribute to the physical and spiritual health of the patient.



Engelsbad and Frauenbad, 1825. Baden bei Wien

Numerous examples can be found in Karlovy Vary where at the turn of the eighteenth century forest promenades equipped with gloriettes and gazebos started to be constructed enabling a view over the surrounding romantic landscape - e.g. gloriette of Dorothea von Biron (1791), pavilion of Lord Findlater (1801) and Maier's gloriette (1804).

There is a special relationship between the urban fabric and surrounding landscape in The Great Spas of Europe. This was promoted and managed as an essential part of the 'spa offer' as part of the cure. Accordingly, there are complex cultural values associated with landscape in and around spa towns. The area surrounding the spa town is held to be a "therapeutic and recreational spa landscape".

The most extensive therapeutic and recreational spa landscapes developed around the City of Bath, Karlovy Vary, Mariánské Lázně, Frantiskovy Lázně, Spa and Baden bei Wien. In Baden-Baden, a composed promenade along the river Oos was created. Spa complexes in *Montecatini Terme* are widespread in an extensive park landscape.

Historicist styles, Art Nouveau/Jugendstil and Fin de siècle

The greatest efflorescence of spa culture definitively arrived in the second half of the nineteenth century. In many spa towns, this era is regarded as a golden age, in which the most important curative centres expanded into large sophisticated destinations famed around the world. Changes in their visible architectural form were inspired by advances in medical science. In the effort to react to new requirements, many new types of spa buildings were created, with modern facilities and stylistically drawing on an ever-increasing range of wider historic models, from the Renaissance through Baroque and Rococo motifs. This stylistic pluralism, an eclectic mix of historicist styles, culminating towards the 1880s, gradually expanded across the entire continent. Architecture allowed the spa guests to move through space and time, without having to leave their place of cure. A walk through the spa could at one moment evoke the sun-washed hills of Italy, and yet another one the splendours of France, the romance of medieval England, or even the distant Orient.

Ostentatious structures in historicist styles were built in almost all component parts of *The Great Spas of Europe*. Examples include, for instance the Friedrichsbad in *Baden-Baden* (1869-77, neo-renaissance), theatre in *Baden-Baden* (1860-62, neo-baroque), the older part of Luitpoldbad in *Bad Kissingen* (1867-71, neo-renaissance), Kurhaus in *Baden bei Wien* (1886), New Spa in *Mariánské Lázné* (1893-96, neo-renaissance), the new Kurhaus - Grand Hotel in *Bad Ems* (1912, neo-baroque integrating old baths), or the neo-classicist Maxbrunnen (1911) and Wandelhalle (1910-12) and neo-baroque Regentenbau (1910-13) in *Bad Kissingen*.

Regentenbau, Bad Kissingen



Many structures in historicist styles were constructed in *Karlovy Vary*, a number of them can be ascribed to prominent Viennese architects, F. Fellner and H. Helmer: Imperial Spa (neo-renaissance, 1893-95), Municipal Theatre (neo-baroque, neo-rococo, 1884-86), Market Colonnade (1883), Park Colonnade (neo-renaissance, 1884), Festivity Hall of the Grandhotel Pupp (neo-baroque, neo-rococo, 1905-06), Hotel Ambassador (neo-gothic with Art Nouveau elements (1899-1900) or Goethe outlook (neo-gothic, 1888-89). Built in this period was also the vast columnal Mill Colonnade (neo-renaissance, 1871-72).

In the second half of the nineteenth century, architecture and the building industry were evermore influenced by the use of new building materials, iron, steel and cast-iron. Whole colonnades were built with these materials. These influences would first come from the English, German and then the French environment, where even small spa towns would build various pavilions, verandas, loggias, or majestic covered promenades and galleries made of iron and cast-iron elements instead of the former wood. Whilst the early (1841) and innovative cast-iron example of the fountain hall in *Bad Kissingen* was replaced, examples may still be found in *Spa* where the gallery Léopold II made of cast iron was built in 1878, and *Vichy* (Halle de Sources, 1903). The largest and grandest structure of this kind was built in *Mariánské Lázně* (Spa Colonnade, 1888-89).

Building in iron and steel enabled hotels and some spa buildings to be larger and higher than had been previously possible. This changed the character of spa towns that had a domestic scale of earlier medieval fabric to busy cosmopolitan modern towns. Large baths ensembles and hotels were built in all the 'Great Spas'. Representative examples of large baths ensembles are the Friedrichsbad of 1869-77 at *Baden-Baden*, and the Luitpoldbad of 1868 and Kurhausbad (1823, renovated in 1858 and again in 1927) at *Bad Kissingen*. Notable spa hotels include Hotel Imperial (1910-12)

Spa Colonnade in *Mariánské Lázně*, c.1910



Palais des Sources, *Vichy*, *c*.1910



and the exceptional Grandhotel Pupp (1892-93) in *Karlovy Vary*, a 'mega-structures' of their time that achieved an architecture that invoked an atmosphere and emotion of immersive grandeur.

In the relaxed atmosphere at the turn of the twentieth century (Fin de siécle), the Art Nouveau style (Jugendstil in Germany, Stile Liberty in Italy, Secese in Bohemia), embracing a wide range of fine and decorative arts, started to be applied in many European countries. This found its expression in The Great Spas of Europe too. Luxurious buildings in the Art Nouveau style can be seen in particular in Vichy, for instance the new opera and theatre designed by Le Coeur and Woog (1898-1903) but also in Baden bei Wien with its Sommearena (1906) or Municipal theatre (1908-09), in Bad Ems (Kurtheatre, 1913-14) or Karlovy Vary (Zawojsky House, 1899-1901).

Towards the end of the nineteenth century, business in some of the spa towns had been declining, so new investment was sought to stimulate a revival in lessons learnt in other spas and advances in their treatments. Architects and managers from the *City of Bath*, *Montecatini Terme* and *Vichy* visited spa towns in Europe.

The *City of Bath* architect, Major Davis, with the surgeon to the Bath Royal United Hospital, Dr Freeman, visited several continental towns in 1885. On their return, their report recommended the City Corporation to make major investment in the centre of the city. This introduced changes to incorporate the now fashionable European treatments into the spa offer. This was achieved by building in an extensive suite of treatment rooms extending along the north side of Bath Street linked to the Kings Bath and a new Pump Room Hotel. A second and very large hotel followed and this survives as the Empire Hotel.

The ministry architect in Paris, Charles le Coeur undertook a similar mission on behalf of *Vichy*. In 1898, he visited several spa towns including *Bad Ems*, *Baden-Baden*, *Karlovy Vary*, and *Mariánské Lázně*.

The Director of the Società Nove Terme (the Society of the New Baths) Giulio Bernardini examined spa towns in Switzerland, Bohemia and Germany on a tour he undertook in 1901. His tour included *Karlovy Vary* and *Baden-Baden*. The influence of the Mill Colonnade at *Karlovy Vary* is reflected in his subsequent design for *Montecatini Terme*.



Morning promenade at the Mill Colonnade in *Karlovy Vary*, 1904

The magnificent era of *The Great Spas of Europe* came to a violent end with the outbreak of World War I. Many enchanting spa towns found themselves unable to continue as before, following such an interruption. However, several prominent spa buildings inspired by pre-war architectural trends were built or adapted even in the 1920s and early 1930s. This is the case of, in particular, *Montecatini Terme* with its neorenaissance Regina baths (1923-27), remodelled Torretta Thermal Baths (1925-28) and especially renovated old Tettucio Thermal Baths (1920s). In *Františkovy Lázně*, the Glauber Springs Hall, the neo-classicist drinking hall was constructed in 1930.

The coming of the railways

Industrialisation in Europe followed the advances in the development of steam technology that took hold in Britain during the eighteenth century. Here, too, the principles of steam-driven railways were first applied at the beginning of the nineteenth century, and the reliable operation of the modern passenger railway during the 1820s and 1830s prompted their widespread use.

Securing railway access to *The Great Spas of Europe* was essential for their continued viability and, accordingly, each sought an early link to the railway network. Such networks connected with capital cities and, on the continent, to other countries, accessing large populations with a means of fast and comfortable transport. The introduction of railways removed many of the challenging conditions for travelling in the winter months and this enabled the spa season to be extended. At the same time, easier and affordable travel by railway encouraged more people to take summer vacations. By the 1830s and 1840s doctors in France were advocating that spa visits should last at least twenty-one days.

Going to spas became a vacation form, especially in the summer, and became a model for holidays of the growing middle class. Railways became a key growth mechanism for spa tourism: the City of Bath is located between London and Bristol and connected to the railway in 1840; Baden bei Wien was connected to Vienna in 1841 and Baden-Baden was connected in 1845 (and to Paris by 1869); Spa was connected in 1855, both with Brussels and Cologne; Montecatini Terme was connected in 1857; Bad Ems in 1858; Vichy in 1862; Františkovy Lázně in 1865; Bad Kissingen in 1871; Karlovy Vary in 1871, with connections to Vienna, Oostende, Cologne and Paris; and Mariánské Lázně in 1872. All railways in The Great Spas of Europe were built before the 'Panic of 1873', the financial crisis that triggered a six-year depression in Europe and North America (even longer in Britain and France). For the next century, however, spa guests used the railway as their principal means of travelling to and from the resorts, and many routes offered luxurious sleeping and restaurant coaches.

Railways paved the way for new forms of social behaviour, like (mass) tourism, and contributed to the clear separation of workplace and home. In a wider sense, as tourism became a broadly accepted social practice, the arrival of the railway into the spa towns triggered the construction of hotels, villas, other leisure infrastructure and industry. Increased trade and other commercial activity was enabled, including the sale and large-scale shipment of spring water (for example at Bad Ems and Spa). Connections had to be predominantly made by locating railway stations on the periphery of the then built up areas, most spa towns securing a direct link to the railway network. However, at Baden-Baden and Bad Kissingen the connection was made by means of a dedicated branch line with a terminus building; in both cases the building being large and imposing, and designed to receive and impress royalty. Spa towns sought to introduce a memorable entrance with the station forecourt leading to the centre of the town via a new road. These arrangements were achieved neatly on the edges of most of the spa towns, but the introduction of the railway determined the form of subsequent development in Montecatini Terme and Vichy. Here significant roads, buildings and promenades radiate from the station and in both towns extensive parks and gardens were associated with their development.

The earlier settlement at *Vichy* had been eclipsed by the development of a new spa town around the area of many of the springs. The design of the town, with wide boulevards and

extensive parks, sought to recreate a Parisian character within a provincial spa. The form of *Montecatini Terme* is determined by an urban plan which set out an axis of a principal boulevard aligned to Alto Montecatini. On both sides of this are extensive parks and gardens containing ensembles of spa buildings. The avenue was completed in 1833 so that the arrival of the railway twenty years later presented a challenge to provide a station and an entrance without compromising the established feature of the town. The solution established a piazzale in front of the railway station and close to the existing church at the southern end of the Viale del Tettuccio. This ensemble was completed by 1880.

In the spa towns, the station was generally the most prominent and the most visible element of the railway, and provided the first impression which a town can offer its visitors. Therefore, high-quality architecture was demanded. The station was also the starting point of an urban ensemble that formed a specific set: the station building for the passengers and for traffic control; its square directed to the town-centre; and the road which links the station with the centre. As is seen in the spa towns (for example Bad Ems), the station divided the "front-side" (spa guests crossed the square and took the station road, passed parks and gardens with residential areas and shops, to the spa quarter) from the "backyard" (characterised by a different setting, including a lack of public buildings and parks, and considerably less residential buildings, making it more popular as a local industrial and commercial area).



The Sudbahn Railway, Baden bei Wien. In the background are the two ruins Rauhenstein and Rauheneck framing the entrance into the therapeutic landscape "Helenental"

Spa support infrastructure

Cheaper coal fuelled plants or small factories that were bottling the waters and preparing salts from them. Mineral waters had been transported from spa towns across Europe from the sixteenth century, but railways enabled this to be undertaken more profitably and to a more extensive market. Bottled mineral water came to be an essential part of the promotion of the resorts of Vichy, and Spa, to the extent that these towns were 'branded' conferring their name on the bottled water. Branding of water and salts was essential to promotion and in some cases the brand of water has become absorbed into language.

Water has been exported from Bad Kissingen since the sixteenth century. Worldwide export was undertaken from 1825 onwards.

The town of Františkovy Lázně marketed its water drawn from a number of its springs. A new bottling plant was built in 1872 on the site of buildings that had been used earlier for bottling water. The present ornate single storey building is used to bottle water from several springs and must be unusual for an industrial building to be decorated in an elaborate neo-Baroque style. In Montecatini Terme water from various springs was collected and bottled, and had been exported from the seventeenth century, but more recently it was collected and bottled in a more modest building of 1910 in front of the Leopoldine baths. In Spa, up to the nineteenth century water had been bottled by hand at each of the sources. This included chalybeate water which was bottled in dark glass to prevent iron oxides from precipitating. From the beginning of the nineteenth century developments in pharmacology had led to the development of iron-based medicine so that chalybeate water lost its therapeutic reputation and commercial viability. From the

1860s, the resurgence and popularity of *Vichy* water with the support of the Emperor had affected the sales of Spa water so that the company responsible for its export was reorganised several times. By 1912, bottling was undertaken in rooms below the terraces of the Baths Establishment. The *Compagnie fermière des eaux et des bains de Spa* became *Spa Monopole* in 1921 and bought out its rival *Royal Spa* in 1924. The new company introduced improved marketing and production. Bottling was moved to accommodation in Rue David and then in 1923 to a modern factory near the railway station.

Water from Vichy had been bottled and exported from the seventeenth century. Louis XV had bottles of Vichy water sent to Versailles in 1753 and in 1687 Madame de Sévigné wrote about having bought bottles of Vichy water. From 1716, a donation for every bottle sent from the town went to local hospitals, and this practice continued until 1939. In 1844 a deep well had been sunk below the Source des Célestines and water from here was the first to be bottled and exported for a mass market. The sources were owned by the state. In 1852, it leased its rights to the water to the Compagnie Fermière thermale de Vichy. After his visit in 1861 Emperor Napoleon III was enthusiastic about the benefits of Vichy water and this enthusiasm contributed further to the promotion of the water. The arrival of the railway in 1862 further helped the promotion of Vichy water after the Compagnie Fermière set up new bottling plants along the line of the railway.

From the middle of the nineteenth century many spa towns benefited from reforms in civic governance. Administrations took on new duties to respond to necessary changes in fabric and infrastructure. The introduction of tram services resulted in widening and straightening of old roads. Demand for public health called for the introduction of sewerage and drainage schemes. Rivers were cleaned and associated flood prevention measures introduced. Gas and electricity services were introduced in all the towns resulting in a marked change in the character of the urban areas at night and in winter months with lighting in shop windows and streets.



Early poster of *Vichy*

Bottling plant, 1898, Františkovy Lázně





Source des Célestins, *Vichy*



Spa bathroom, 1890, Františkovy Lázně

Increasing protection of the springs and setting

Natural mineral and spring waters are a gift of nature and the raison d'être of spa towns (and of the bottled water industry). The waters are a renewable resource, replenished continuously through the hydrological cycle. Although underground water is common and widespread, the qualities of the thermal and cold mineral waters of *The Great Spas of Europe* are particularly special. The infiltration of meteoric water that resurfaces after a long and slow underground traverse is also affected by groundwater of deep (magmatic and volcanic) and non-meteoric internal origin. Elements of deep origin such as boron and lithium, and natural radioactive elements, indicate these inflows, together with carbon dioxide.

Water quality and purity, and the flow rates of the springs that have long sustained the economies of spa towns, need to be protected from incompatible activity. The risk of interrupting flow, or of contamination, depend on the nature of such activity and of the intrinsic vulnerability of the aquifer system itself. Hydrogeology, the branch of geology devoted to the study of underground water, is of particular importance to the 'Great Spas', especially when drilling/boring deeper into aquifer systems became commonplace. Each of the component parts has been subject to comprehensive studies in certain cases through the centuries. The effective (and in many cases legal) protection of their springs in terms of quantity/flow, and their respective intakes or catchments, is therefore generally long-standing.

In France, 'thermalisme' has a long history, and a firm establishment, in the health structure of France. Hot springs became State property in 1549, under King Henri II (1519-59), and in 1605 Henri IV (1553-1610) introduced the first State controls and appointed a Superintendent of the Kingdom's Mineral and Medicinal Waters. Following the French Revolution, new regulations were drafted in the early nineteenth century, and the Royal Academy of Medicine was created in 1820 to assume supreme authority over all things related to natural mineral waters. In 1856 an Act made it possible to delineate a protection perimeter around each spring to protect its flow (in *Vichy* the frequent diversion of natural mineral waters was known as the 'war of the springs'). In 1860 a decree was issued concerning the surveillance of springs and spas, and including the use and management of their water, in order to monitor water quality and preserve its physical and therapeutic properties. It also had a second purpose to harmoniously distribute spa establishments with regard to high economic potential.

The meteoric catchments of the Czech Bohemian spas have long enjoyed protection. The oldest ever record of the protection of mineral springs (1516) relates to the outflow of the so-called Eger (Cheb) acidulous water which was situated in the place where Františkovy Lázně is now located. Institutional protection of the Karlovy Vary springs dates as far back as 1761 making it thus the second oldest institution of its kind in the world after Františkovy Lázně. The first protective zone for Mariánské Lázně was established around the curative springs in 1866 by decree of the Czech governorship. Since 1959 the sources are protected by modern protection zones via inner zones (protection of the spring outlets), the forests around the spa towns (where no industry is allowed), and the surrounding area where no activity is allowed that might negatively affect the groundwater (agriculture is only allowed with restrictions, for example, on the use of manure). In 1974, Ceský les Protected Landscape Area (610km²) was established with the specific aim to protect the areas of the origin of the meteoric source of the mineral springs of Karlovy Vary, Mariánské Lázně and Františkovy Lázně, and to generally conserve the landscape around them. The terrain comprises extensive raised peat bogs and vast forest complexes, hugely important for the hydrology of the spas.

In Belgium, at *Spa*, the Fagne de Malchamps Catchment Area in the Ardennes is the largest (132 km²) mineral water protection area in Western Europe and one of the oldest, established in 1889. It comprises high moorland, wetland, peat bogs and deciduous forest, and today Spadel (the last major Belgian independent family producer; formerly Spa Monopole) is in partnership with the region's Region's Nature and Forest Department and the city of *Spa* to manage the area in an optimum way.

In Germany, the common quantity medicinal spring protection areas of all the *Bad Kissingen* mineral springs was fixed in 1922. The common qualitative medicinal spring protection areas of the Kurgarten springs as well as for the 'Runder Brunnen' have been valid since the 1980s. *Bad Ems* and *Baden-Baden* also present historic protection regulations.

Following the study of the Bath and Bristol Region of 1930 the *City of Bath* was able to bring forward a Green Belt around the city and this was largely in place by 1939. The protection of the Hot springs in the City was enabled through a private Act of Parliament in 1937.

Thermal medicine and The Great Spas of Europe

The golden age of thermal medicine is between the second half of the nineteenth century and the 1930s. Whilst little remains of the medical therapeutic practices of this period, all their values survive with a special and renewed place in modern medicine that is more effective, but also more respectful of patient integrity. It can be therefore considered that thermal medicine has a value that is both universal and outstanding.

Thermal water is natural, universal and accessible to all. If its use in human health is present on the five continents, it is mainly in Europe that its use has been medicalised for about six centuries. In fact, the beginnings of thermal medicine date back only to the fourteenth and fifteenth centuries. The first known written evidence of the curative use of European thermal waters is in a letter of July 24, 1387, from an important Tuscan merchant to his doctor: "....how can I drink the curative waters of Montecatini baths?". Soon after 1370 when Emperor Charles IV (Karel IV) bestowed on a spa hamlet the privileges of a royal town, scholars studied medicinal compositions, prescribed treatments in Karlovy Vary

and provided the first record of medical use of thermal water. In his "Tractatus de balneis" (Treatise about baths, 1417), Doctor Ugolino Simoni made a survey above the most important Italian baths, speaking about the well-known therapeutic properties of the thermal waters of *Montecatini Terme*. The very first German-language spa non-medical guide from Hans Folz entitled Dieses Püchlein saged unß von allen Paden... (1480), mentioned the baths of Bad Ems, Baden bei Wien, Karlsbad (Karlovy Vary), and Baden-Baden. The very first French-language spa non-medical guide from Nicolas de Nicolay in 1567 was entitled Description générale du pays et duché de Bourbonnois, and included a presentation of *Vichy*. At the end of the fifteenth century, in his ode "In Thermas Caroli IV", humanistic poet Bohuslav Hasištejnský of Lobkowicz pointed out that the Karlovy Vary mineral water was used to heal all ailments. This poem represents the first written record on local springs and was subsequently translated into 25 languages.

The first medical treaties on the use of the waters were mainly published in the sixteenth century: 1522 for Karlovy Vary by Dr Václav Payer who started to prescribe thermal water for internal use; 1528 for Mariánské Lázně; 1535 for Bad Ems by Dr. Johann Dryander Vom Eymsser Baden; 1562 for the City of Bath by William Turner The Book of Natures and Properties of the Baths of England; 1631 for Vichy by Claude Mareschal, Physiologie des eaux minérales de Vichy en Bourbonnois. 1589 for Johannes Wittich, Aphoristischer Extract Und kurtzer Bericht, des mineralischen Sauerbruns zu Kissigen, im Fürstenthumb Francken, von seiner Kraft und Wirckunge, Erfurt 1589.

It is mainly in the seventeenth century in Europe that works describing a scientific medical approach of the therapeutic effects of thermal waters appear, and the beginnings of a legal organisation for control and welfare: Henri IV created the charge of Surintendant des eaux minérales de France in 1605 (Superintendent of French Mineral Waters). In Vichy in 1679 and then in 1686, Claude Fouet, the first intendant of the mineral waters of Vichy, described the beneficial or even "miraculous" therapeutic effects of thermal waters on multiple ailments. Similarly scientific medical books were published in Italy, Bohemia and in Belgium (in Latin, then in French), with the title of Spadacrene (1614), anticipating modern thermal medicine, and the fruit of ten years of observation of Dr. Heers treating patients with Spa waters. It was at this time that the significant development of the spa resorts of the City of Bath, Spa, Vichy, and Karlovy Vary began.

Thermal medicine then developed in the eighteenth century in Europe with the first chemical scientific analysis of thermal waters. This development was achieved homogeneously in Europe despite a geographical and cultural dispersion. In the middle of the eighteenth century, structured and functional spa treatment establishments often became the biggest buildings of a spa town, requiring a reorganisation of the access roads and often the destruction of ancient medieval surrounding buildings (for example in Vichy, and in the City of Bath). Usually, it was the crowned heads and the aristocracy that financed these establishments or made them fashionable (Leopold of Austria, Grand Duke of Tuscany in Montecatini Terme, the two daughters of King Louis XV in 1785 in Vichy, Emperor Joseph II in Spa, Peter I the Great in Karlovy Vary). In the City of Bath it was the Bath City Corporation which undertook the development of the town and its general hospital and favoured by subscription the medical aspect: "Bath has become the great hospital of the nation" (Tobias Smollett, 1752). The publications of therapeutic effects thrived, still considering thermal water as "miraculous" in comparison with the ineffectiveness of the empirical treatments of the time. Walks/ promenades and physical activities were arranged and organised, the therapeutic properties of which being already considered complementary to the thermal cure, at the same time in almost all European countries. In Spa, doctors associated relaxation with the mineral water cure, prefiguring, a hundred years before its development in Europe, the creation of a form of resort. This was described in 1734 by the Baron Pöllnitz (which was later translated into English, German, Dutch), abundantly illustrated and entitled "Les Amusemens de Spa" ("entertainments/amusements of Spa") where the emphasis is within the title, on the amenities of the village, associated with the benefits of the cure (we also find this notion In the book of Hans Folz on the German baths as early as 1480).

When in the 1760s Dr. Becher discovered the presence of carbon dioxide in the mineral spring of *Karlovy Vary*, an "air" that immediately evaporated from the water, he was seized with the inspiration to ensure that thermal water would be drunk in the shortest possible time from its being drawn from the source. More and more frequently, the spa guests began to emerge from their dwellings and head in groups to the spring-heads, to take their daily doses of water. To ensure that the curative springs could be used for drinking even in inclement weather, they were given coverings, starting with simple roofs or small bowers, later developing into more costly structures in forms determined by the dominant taste of the moment.

At the end of the eighteenth century, Dr. Bernard Adler started to experiment with spa treatments using mineralised peat in *Františkovy Lázně*. A special method of bathing in a peat with an admixture of mineral water was elaborated here which was later copied in many other spa towns.

The word "thermalism" (or spa) was used for the first time in France in 1845 and was then defined as "the medical use of mineral waters". From the middle of the nineteenth century, with the progress of medical experimentation, chemistry and physiology, the "miraculous" effects of the spa treatment began to be discussed and questioned by doctors and academics.

This was nevertheless the apogee of innovations in thermal medicine which continued for more than a century until the appearance of drugs from the chemical and pharmaceutical industries in the middle of the twentieth century.

Thermal springs in Europe were distinguished by their chemical composition, but comparison of their therapeutic efficiencies shows that they are less related to their chemical composition than to the organisation of the stays, innovation in the use of thermal waters and their derivatives such as gas (Vichy, Bad Ems, Mariánské Lázně in 1818), salts for making pastilles in Bad Ems and Vichy or waffles in Mariánské Lázně. Durand-Fardel said about thermal medicine in 1851 "The mineral waters predispose to healing rather than cure": this is still true in 2019. Nevertheless, thermal medicine was a receptacle of many physical (radioactivity), physiological, and microbiological sciences that contributed to its development. Nevertheless, a relative homogeneity was developing in the practices of thermal medicine through practical guides and international congresses which multiplied in the European cities. Thus, in 1921 the ISMH (International Society of Medical Hydrology) was created.

After World War II, medical developments supplanted hydrotherapy and signed its general decline, to the point that some governments abandoned the medical prescription for their country while putting in place their National Health Insurance (Belgium,

Source of the Sauvenière and the Groesbeeck, Spa



United Kingdom). Nevertheless, thermal medicine has been recognised by the World Health Organization since 1986 and is taught in several European universities. Thermal medicine is an integral part of non-medical therapies used in medicine. Since the mid-2000s, mainly in France thanks to AFRETH, publications in peer-reviewed scientific journals demonstrated the medical efficiency of spa treatments, particularly on chronic diseases which have been always considered as the best medical indications for the last two centuries in thermal medicine.

Although thermal medicine has lost its "miraculous" therapeutic virtues nowadays, it has benefited from a new surge of interest among doctors and patients. It holds its place as a complement to allopathic medicine to improve the quality of life of patients, their rehabilitation, their "well-being" or even serves in a privileged place for the prevention of ageing-diseases.

Thermal medicine and the urban typology of the spa

Thermal medicine is the only example of urbanisation around a medical practice, whereas many spas in Europe did not initially have a geographical advantageous location to their urban development. It is the thermal water alone which has led to urban development on a "human scale", organised around the thermal springs and healing patients. The spa towns are always small- or medium-sized and have been sophisticatedly equipped so that all the specific medical care arrangements are usually accessible on foot, encouraging "standing patients" to be active during their stay.

It is the organisation of a holistic medical care of patients that led to the specific urbanisation of European spa towns, and which has shaped their progressive development through the centuries with both an aesthetic concern and a medical concern for urban architecture, centred on the thermal springs. This gives them their unity, their homogeneity (mutual German, Italian and French influences, for example, or English, Belgian and Italian) and their difference from other cities.

This specific urbanisation includes:

Reception of the patients:

- The construction of hot springs halls at the point of the emergence of springs or close to where there are several springs available in the spa town.
- The construction of thermal baths for medical care (or even hospitals for the poor like in the City of Bath, Vichy, Spa, Baden bei Wien, Karlovy Vary, Montecatini Terme) where each town or city searches for perfection for its patients with complex architectural programs and sumptuous decorations for the thermal establishments as well as for the surrounding buildings. This is a specific need for thermal medicine which treats patients individually and does not simply offer public baths of hot water as it is practiced in many countries.
- Railway station for the arrival of trains in the urban centre, favouring the transport of curists (and tourists) but also of bottled waters (Bad Ems, Karlovy Vary, Spa).

- The construction of large hotels and then palaces near the thermal springs. In 1850, or earlier, hotels gradually replaced the lodging houses and evolved at the turn of the twentieth century towards 'palaces'.
- At the same time, residents set up furnished apartments in their villas on the periphery of the spa quarters. They beautified them for the curists, either the famous wanting to stay incognito, or more modest not being able to pay the price for a hotel, but with the concern of the quality of the welcome and modern comfort. The architecture of the villas was adapted to the reception of the curists, adding beautiful façades and foyers of welcome to attract the curist, internal organisation of the villa allowing the curists to be independent on their floor in a property inhabited by the owner. In other cases villas are equipped for doctors, often able to accommodate the sick or offer them care (*Vichy, Montecatini Terme, Bad Kissingen*).

The mobilisation of the patient's body has led to:

- The transformation of the natural landscapes surrounding the spa (thermal springs, rivers, valleys, vegetation) and the development of urban landscapes (parks, paved or gravelled spaces, remarkable and exotic trees, flowers, games, recreation, covered galleries to avoid being too exposed to the sun or bad weather, decoration of the cities, vehicle-free zones for pedestrians), all constituting a "therapeutic and recreational spa landscape" where everything invites to the promenade because it is accessible on foot from the springs. "The health also comes through the eyes": the paths of the promenade are carefully maintained and decorated, and accessible to the curists of any physical condition. The curist is invited to visit the city through walks arranged to go to springs or the main places and principal features. Nature and architecture are reciprocally valued. These facilities do not exclude others in villages near the spa town, the free time of the curists during their stays allowing them excursions in the neighbouring villages and in the surrounding countryside.
- The construction of multiple sports facilities (individual, couple, family or group activities) concentrated on a small urban space allows the practice of several successive activities and to meet the hobbies of the patients. In *Vichy*, for example, 26 of the 28 Olympic summer disciplines can be played, all of them being accessible on foot.

For the "mental relaxation / release of the mind" an anthology of installations was built throughout the nineteenth century (sometimes earlier) that varies according to the town or city but concurred in all cases to the well-being, the tranquillity and the safety of the curist:

- Places of entertainment and games: gaming, gambling, casinos, card games, billiard rooms, conversation rooms, outdoor games, sports, street and park entertainment.
- Musical entertainment venues: music kiosk, opera, street orchestra, dance halls, ballrooms, musical theatres.
- Places of cultural entertainment: theatre, art exhibitions halls, museums, salons, bookshops, conference halls, conversation rooms.
- Embellishment of the city: architectural quality of public buildings, decorative flowers, beautiful shops, squares, riverbanks, pedestrian streets, clean spaces, arranged landscapes for organised excursions around the spa
- Prohibition of noise inside houses as on the street, to ensure the quietude and the quality of sleep.
- Small shops and boutiques for buying local souvenirs to bring home (candies, cosmetology, homeopathy- naturopathy- products based on thermal water, trinkets in the name of the spa town, porcelain spa drinking vessels).

Mutual influences between The Great Spas of Europe

The end of the eighteenth century is marked by the rational period of thermal medicine linked to chemical analyses of the waters. The use of water (increasingly from the sixteenth century) then specialises according to the diseases, the condition of the patient and the chemical characteristics of the thermal water. Doctors from Italy or France were convinced that for each disease there was an appropriate spring. On the other hand, in Germany, the waters (at least in the Middle Ages) were all "able to do everything". The former kept the water at the centre of treatment while the latter multiplied the annexe techniques.

In this context, there was no open competition between physicians of the different spa towns. For instance, Montecatini Terme and Karlovy Vary estimated they had no competitor among other European spa towns (and vice versa), just because each of them is exclusive, according to their unique thermal content and practices, history and culture traditions, climate and countryside, touristic position and urban outlook. For instance, in Spa there was little bathing, whereas drinking cures were the usual prescription, and the reverse was true for Karlovy Vary until the eighteenth century. This did not prevent each spa town from observing the others, curists to compare their stays from one country to another, patients from Karlovy Vary to visit spas in Baden-Baden, and thus for spa towns to undergo multiple mutual influences. Physicians and doctors shared their knowledge and their results of innovative treatments as well for thermal medicine and for medicine in general.

The only serious competition between spa towns was linked to the war between France and Prussia in 1870-71. A "water war" developed just after, and a French thermal nationalism flamed to the detriment of German spa towns: for instance Châtel-Guyon was called "the French Kissingen", Baden-Baden "has no therapeutical efficacy" and the tiny resort of Miers was called "the French Karlsbad" and did as well as Bad Kissingen. This did not prevent Vichy from copying in 1899 the covered galleries of Karlsbad (Karlovy Vary) initially designed to allow the curists to walk with their glass in their hand in order to wait for the water to cool and be drinkable: its functions in Vichy was transformed and mainly used for protecting curists from bad weather or hot sunshine.

In this context, thermal medicine developed homogeneously in Europe in the nineteenth century. Scientific works from other physicians are always cited when a book is published, irrespective of their country of origin, and the same is applied in spa towns if considered as a progress in medical knowledge. Moreover, physicians in spa towns were usually famous and knew each other in the different countries by reputation. Cooperation and partnership between border spa towns was therefore easy, for example between those in the Czech Republic, Germany and Hungary.

Below are quoted a few examples, among a great number, of mutual influences in thermal medicine between spa towns and countries:

After his return from Italy where he helped to establish thermal bath at Lucca (Tuscany), Emperor Charles IV founded the thermal bath at Loket (now Karlovy Vary) in the mid fourteenth century.

It was Michel de Montaigne (1533-92, philosopher of the French Renaissance) who, in the sixteenth century, discovered the thermal showers and affusions in Italy and brought back the practice to France where baths predominated.

Wenzel Payer of Loket (now Karlovy Vary) who had a doctorate in medicine from the university in Bologna, Italy and who visited several Italian spa towns recommended, in his publication Tractatus de Themis Caroli IV (1522), drinking the spring waters in addition to bathing in them.

Probably the earliest examples of translations of a spa town monography in another European language is the medical thesis entitled Kurzer Bericht vom Emser Bad by J. Daniel Horst on Bad Ems, dated 1683. This compared his baths to those of Bohemia, and was translated from German into French.

An innovative French treatment by mineral water inhalation in 1847 was introduced in 1855 at Bad Ems by Dr. Ludwig Spengler. The innovative fixed inhalator he developed has been refined until today, making a significant contribution to this popular method of treatment.

Within the Austrian Empire, Františkovy Lázně was the first to use muds for spa treatments in the nineteenth century. This innovation was then copied by many spa stations in the Austrian and German empires.

The 'Pastilles de Vichy', made with extracted thermal water salts, were initially produced to be dissolved in fresh water and therefore to pursue the medical water cure when patients were back home. They were copied at Bad Ems producing the 'Emser Pastillen' from 1858. Both pastilles are still produced today. Bad Ems and Vichy were often compared because their waters are highly bicarbonated and therefore effective in the treatment of gout.

The technical operation of the Imperial Spa in Karlovy Vary, which from 1895 included the distribution of bathtubs filled with peat to clients' cabins, was subsequently copied in many European spa towns. Since 1870, the Bad Kissingen system of transporting bathtubs on rails was very modern, and in 1925 its system of filling bathtubs by a pumping system was exemplary.

The 'Vichy horizontal massage shower' invented in June 1896 in Vichy was used in the City of Bath spa from the beginning of the twentieth century and was subsequently copied all over the world.

The German architectural arrangements of the 'Trinkhalle' model adopted in order to consolidate access to its multiple sources in one place, was copied by Vichy after a study tour in 1898 through the main European spa towns.

In the years 1951–56, CO₂ gas injections began to be used in Mariánské Lázně and are now used equally in Karlovy Vary. This cure method was discovered at the beginning of the twentieth century in the French spa town of Royat. Now it is widely known, and it can be said that the three cornerstones of spa cure in Mariánské Lázně are water carbonated baths, dry carbonated baths and CO₂ gas injections.

Some examples of medical articles on thermal medicine, published in different countries of *The Great Spas of Europe*, include:

- a. Frederic Cattie: Handbook for Ems and its environs, with observations on the use of its mineral waters and an account of the geology of the neighbourhood. 1855.
- b. Becquerel, A.: Des eaux d'Ems. Études sur les propriétés physiques, chimiques et thérapeutiques de ces eaux. Paris 1859.
- c. Cormack (Dr), Vichy and its Waters, Paris, 1895.
- d. Méthode générale d'analyse ou recherches physiques sur les moyens de connaîtretoutes les eaux minérales, translated from the English book by M. Coste, Paris, chez Vincent, 1767, in-12. Gustave Monod.

There are also books that make comparisons between famous spa towns. Examples include:

- a. Monod G. The Treatment of Gastro-Hepatic Dyspepsia at Vichy, Carlsbad, and Cheltenham, J R Soc Med April 1912 5: 7-16.
- b. James C. Guide pratique aux eaux minérales de France, de Belgique, d'Allemagne, de Suisse, de Savoie, d'Italie et aux bains de mer. Ed. Victor Masson. Paris 1852. 559p
- c. Several books and articles have been published comparing *Karlovy-Vary/*Karlsbad and *Vichy* (Durand-Fardel M; Durand-Fardel M. &
 Durand-Fardel R.; Parturier G.). The non-competitive differences
 in medical practices between the two spas is clear through these
 comparisons: "two medications, roughly identical in appearance and in
 their therapeutic effects, but with effects on the organism in a quite
 different way", "the waters of Karlsbad, being commonly disruptive ... are
 mostly suited to torpidous organisms, while those of *Vichy*, whose tolerance
 is essentially silent, are more suitable for excitable organisms."

 "The treatment of Karlsbad exercises a more energetic action on the old
 malarial liver engorgement, and the treatment suited to hepatic colic."

 "The dogmatic severity of the diet at Karlsbad is famous; The liberal tolerance
 of the regime followed in *Vichy* is no less well known". The nationality of the
 sick does not matter to *Vichy* whereas in Karlsbad (*Karlovy Vary*), French

and Spanish hardly tolerate the waters. Drinking cures are more spread over the day with meals in *Vichy* than in *Karlovy Vary* where they are concentrated in the morning on an empty stomach.

Diversions

From the beginning of the eighteenth century, spa towns flourished as centres of pleasure and leisure. Then, the line between recuperation and recreation was thin. Bathing, drinking and associated spa treatments only occupied a small part of the day. So, concessioners and managers of spa ensembles and spa towns ensured a continuous supply of entertainments and opportunities for leisure and recreation to occupy time when curists were not taking the waters. This required a considerable investment in assembly rooms, casinos, ballrooms, theatres, promenades and parks and gardens - made available to wide-ranging classes of the public.

Opportunities for less formal leisure were available in coffee houses, inns, subscription libraries, meeting rooms and salons. In many of these places, a wide range of books was available in many European languages together with newspapers from across Europe. Coffee houses provided refreshment, conviviality or solitude and also access to newspapers, books and journals. In the *City of Bath*, unusually and unlike London and Birmingham, eighteenth century coffee houses were open to ladies. Subscription libraries were independent commercial enterprises but libraries were included also in Konversationhäuser such as the Marx bookshop and library in the Konversationshaus in *Baden-Baden*. Access to these libraries was not determined by class or gender but in the *City of Bath* women also had their own subscription library.

The range of opportunities on offer for leisure and pleasure attracted aspiring bourgeoisie and, for many, these activities reflected how they perceived and defined themselves. The opportunities were hitherto restricted to Court entertainment and elite leisure, but now leisure became available, public and commercial. In this way, this progression contributed to changing the relationship between an elite ruling class and an emerging middle class – that now had an increasing disposable income and leisure time.

The joint pursuit of pleasure was enjoyed by both men and women; and here manners were forged. For example, civility was expected around a gaming table. This in turn contributed to the development of a polite society, broadened literacy and enlightened thinking - essential features of the Eighteenth Century Enlightenment in Europe.

All the 'Great Spas' include substantial buildings and designed spaces for entertainment and recreation. After the baths, drinking halls and treatment rooms, the next most significant building in all the spa towns, was the principal function room which hosted assemblies and balls. Principal amongst these are the maison d'assemblée, Kursäle and Konversationhäuser and they provided places to meet in conversation rooms salons and dining rooms. Representative examples include the Waux-hall of 1770 in *Spa* and the Kurhaus in *Baden bei Wien*. Many of these buildings included rooms and spaces for other activities such as casinos, music rooms, libraries and reading rooms, with smaller spaces for salons, and lounges. In the *City of Bath* the Assembly Rooms, Pump Rooms, the Abbey, Parades and Pleasure Gardens were the principal focal points for the visitors who were known as the 'Company'.

Spa is not an expensive place of sojourn, and there is no lack of resources for amusement. It has its club; and parties into the country, balls and fêtes champêtres, with illuminations are often announced. Concerts and exhibitions of various kinds are not unfrequently given at the Vauxhall building about half-a-mile distant, and races are appointed for stated periods.

Dr. Edwin Lee, on Spa 1863

Codes of Conduct

Spas assemblies and balls were strictly organised with codes of conduct. In *Spa*, the routine of the day was published in guide books. Some spa towns adopted 'to determine behaviour rules' in casinos, kursaals and assembly rooms. These rules were published in guide books or posted in the assembly rooms and policed and enforced. In the 1860s and 1870s 'rules' were posted at casinos in *Vichy*. These were set out a dress code and guidance for inexperienced visitors on the etiquette and manners that were expected of them. These rules endeavoured to establish level of civility and formality at which patrons would conduct themselves and set out clear parameters for social interaction.

'The Rules of Bath' had been established by the Master of The Ceremonies, Richard 'Beau' Nash in the City at the beginning of the eighteenth century to guide behaviour in the Assembly Rooms. By 1742, the rules had been adopted formally by the City Corporation and they were set out in guidebooks and also posted in Assembly Rooms and Guildhall. In time, the 'Company' in other spa towns adapted and approved their own rules.

Nash's rules in the *City of Bath* were consistent with other published codes of conduct recommending and establishing standards for polite behaviour and accepted manners. From 1600 to 1800, some 435 treatises on manners were published in France, and some 563 treatises were published in England. These rules and codes of conduct contributed to the development of a 'polite society' across the continent and to enlightened thinking in Europe. The acceptance of rules of games in turn influenced the ability to enjoy games in different countries. Careful management of the spa towns made sure there was a reduction of the 'social distance' between the Court, the elite and the growing middle class who could afford to attend the spas for the season. Representative examples of social management were in place in the *City of Bath*, *Spa* and *Vichy*.

It has been obser'd before, that in former Times this was a resort hither for Cripples, But now we may say it is the Resort of the Sound, rather than the Sick; the Bathing is made more of a sport and Diversion, than a physical Prescription for Health; and the Town is taken up in Raffling, Gameing, Visiting, and in a Word, all sorts of Gallantry and Levity'

Daniel Defoe

Gaming

Early spa towns had to rely on existing 'country pursuits' to entertain visitors. However, as European society became more civilised and sophisticated, organised indoor games became established in coffee houses, conversation houses and assembly rooms. The first

A portrait of the Master of the Ceremonies, Richard 'Beau' Nash from Oliver Goldsmith's 'Life of Nash' of 1762.



Richard Nash Esq."
From an Original Printed by Me Hoare,
& presented to the Composition of the
CETY of BANH.

games were generally noisy and involving dice. Then these were replaced by organised, quieter and more elaborate card games. These were followed by table games including roulette in its various forms, such as roly-poly in England and in the *City of Bath* a version known as EO (evens and odds). This was followed in many spa towns with the introduction of purpose-built casinos.

The evolution of organised games with their own rules relied on the willingness of the players to conform to the accepted rules of the game. As rules became established and published, players were able to travel between the spa towns and take part in a game and be able to assess confidently the level of risk in the game and their chances of winning. This is consistent with and reinforced the acceptance of codes of conduct in the Assembly

Rooms and the evolution of manners and a development of polite society.

Gambling had been endemic throughout the sixteenth to eighteenth centuries in Britain and the same was true in much of Europe. As spa towns sought to manage their visitors and patients with codes of expected conduct, state governments sought also to prohibit or control gaming and gambling and, in some cases, this was to establish a monopoly and an income for the state or the town. Early examples are *Bad Ems* (1720) and *Baden Baden* (1767). In England, casinos had been forbidden when certain card games, dice and



1872 engraving. The gambling room prior to the closure of the Casino, *Spa*

forms of roulette were banned in 1739, again in 1745 and then in the 1770s. Control of gaming was undertaken through a system of licensing through local magistrates. Legislation also set limits on sums that might be won or lost. Their aim was not to minimise gaming but to maximise revenue. Nevertheless, the Assembly Rooms in the *City of Bath* were used for gaming, which also continued occasionally and discretely in homes. In the early eighteenth century, card tables were organised in the two Lower Rooms and a card room was built part of the later Upper Assembly Rooms 1761-71 and here the extension of 1771 included a substantial card room.

In other places gaming was controlled through a system of auctioning concessions. For example, concessions for gaming in the German states were the responsibility of the independent states such as Baden, the Kingdom of Bavaria and the Duchy of Nassau. In the *City of Bath*, the Master of the Ceremonies was paid through income from gaming, but the holder of this post was elected by the Company.

In spite of bans on gambling in several European states (these varied with time), spa towns invested in substantial buildings for assembly in which gaming took place. Gaming did not always take place in a building called a 'casino' and at the same time some buildings known as 'the casino' were used for activities other than gambling and these include an hotel in *Mariánské Láznê* and restaurants in *Baden bei Wien*. In *Spa* the first buildings used for gaming were known as the 'maison d'assemblée et de bals' (assembly rooms and ballroom). Amusingly, the name of 'Casino' came into use when gambling was prohibited in 1872.

Gaming was an essential attraction for many spa towns and for many of their visitors, was the principal reason for travelling to the spa. Here ladies could compete in gambling on equal terms with men. All social classes mingled around the gaming tables either

actively taking part or as spectators. For many aristocratic players, gaming was a compulsive fashion and, for a few players from all classes, it was a means of earning a living. At the same time, some physicians considered gambling with the other diversions were a good thing as a distraction from real or imagined medical complaints.

Following revolutions in 1848, gaming had been prohibited in German states - with the exception of several spa towns which gave them a crucial competitive edge. For example, gaming was prohibited in the Duchy of Nassau where casinos closed in 1849 but opened quickly in 1850 in a few towns including Bad Ems. Various factors in the German states had concentrated gaming to four principal gambling spa towns which included Baden-Baden. At the end of the eighteenth century, Baden-Baden absorbed émigrés fleeing Napoleonic France and they invested in their new German homes. They are likely to have brought roulette to Bad Ems after 1800, where hitherto, games had been limited to billiards and card games such as faro. These towns and their spas benefited later from the prohibition in 1837 by Louis Philippe on gambling in France. This decision favoured the Rhineland spas including Bad Ems and Baden-Baden. Then other French men and women crossed the river and took up opportunities for gaming. Amongst these émigrés were several entrepreneurs who took up gambling concessions in Baden-Baden and Bad Ems.

Following a second revolution in France, the newly installed King Louis Philippe in 1837 closed French casinos. On this, Jacques Bénezet, moved from Paris to Baden-Baden, where gambling had long been practiced, and he then outbid Chabert in 1838 for the next concession for running the Konversationshaus. Here he introduced major improvements, modernised the gaming halls, transformed the orchestra and paid for a second Trinkhalle and the branch railway line from Oos. All this contributed to making the town a premier European attraction. The Bénezet family acted more as cultural patrons of the town than as mere directors of casino. When gambling was banned in 1871, unofficial backsliding took place in the International Club and on the racetrack.

Chabert left Baden-Baden to bid successfully for a gambling concession in Nassau in 1838 and this included Bad Ems. Organised gaming had taken place here from 1720 in one of Germany's oldest casinos, first in the Conversationshall of 1696, where gaming took place from 1720. The present Kursaal was finished in 1839 and gaming took place here up to 1859 in the Marble Hall, and as this was used also for concerts in an extension to the west in 1859. Roulette was played here from 1859 to 1872. Gaming continued here until it was prohibited over fifty years later and continued after absorption in 1866 into the hegemony of Prussia where all gambling had been prohibited. Nevertheless, gaming in Bad Ems was permitted to continue until 1872. After the prohibition had been removed an extension to the concert hall was opened as a casino in 1987.

Regulation of gaming in the Kingdom of Bavaria had been different from other German States until its amalgamation into the Republic in 1871. In Bad Kissingen, from around 1800 until 1849, gambling (including hazard and roulette) was practiced in the former "Kurhaus", a building from 1738 that formerly stood next to the Kurgarten. Gambling was prohibited in Bavaria from 1849 to 1871, when it was absorbed into an Imperial Germany, but the ban continued.

The name Casino, however, is not necessarily always connected with gambling: the "Casino" building in Bad Kissingen that is part of the Luitpoldbad had been called "Casino" ever since its existence from 1880. In the beginning its rooms were used as an assembly hall with gastronomy and various gaming offers such as billiards (gambling was prohibited at that time). From 1955-68 gambling took place in a different building (which no longer exists) and since 1968 it has been practiced in the "Casino" building as part of the Luitpoldbad.

Up to 1751, the prince Bishop on behalf of the Principality of Liège had forbidden private gaming in Spa. In October 1762, the Prince granted The Magistrat du bourg (Spa City Council) control over illegal gaming and to collect a tax on gaming and for private investors the right to run assembly rooms for dancing and gaming. The first of the gambling house, La Redoute, opened in 1763. Six years later, after expanding, the building houses with two gambling rooms, a reading room and a ballroom. In 1770, a second and rival assembly room opened: Le Waux-Hall. This had an elegant ballroom, and two gaming salons. Gaming took place in both assembly rooms and the competition was fierce. Especially from 1785 with the opening of a third gaming house that will provoke "The quarrel of Spa games" (La querelle des Jeux de Spa). The Redoute initiated the Casino of Spa (on the same site) which appeared after gaming had been prohibited for the first time in 1872. It had again been prohibited when the Principality was annexed to Napoleonic France and apart from a short break between 1902-19, when all gambling was prohibited, it is the oldest casino of its kind in business.

Throughout the Austrian Empire, and later the Austrian-Hungarian Empire, gambling was prohibited by a series of decrees. Dr Edwin Lee, in 1863 observed of Karlovy Vary that it '... offers but little resource for the idler, being mostly resorted to by invalids. Games of hazard are not allowed in the Austrian empire.' Gambling had been banned throughout the Austrian Empire by Emperor Leopold I from 1696, although concessions were given to some entrepreneurs. Accordingly, no casinos were built in Baden bei Wien and the Czech towns until after 1919. However private rooms in Kurhäuser and Konversationhäuser were set aside for discrete gaming parties. Dr Edwin Lee, in 1863 observed of Karlovy Vary that it " ... offers but little resource for the idler, being mostly resorted to by invalids. Games of hazard are not allowed in the Austrian empire. The prohibition on gaming was lifted in the Republic of Austria in 1930 but the authorities in Baden bei Wien had probably turned a blind eye on the many small gambling operations that had come into being in hotels, nightclubs and private villas. But after the ban was lifted the Republic's biggest casino opened in Baden bei Wien in 1934.

In Montecatini Terme, organised gaming reached a highpoint at the beginning of the twentieth century with proposals for an elaborate kursaal being brought forward by Giulio Bernadini in 1905. His design had been inspired by the Kurhaus at Karlovy Vary and was for 'a vestibule with columns on all sides, a main hall, a vast terrace, a playing room, a reading room, a two-faced stage'. The building was completed in 1908 and enlarged in 1914 and 1921 to include new rooms for a casino and a shooting gallery.

During the middle of the nineteenth century, French spa towns offered theatre, dancing, billiard and reading rooms but they lacked the organised gaming that was then on offer in the German spa towns. Accordingly, their popularity amongst their patrons was diminished until the Louis Philippe's prohibition on gaming was lifted, in spite of the prohibition on gaming in France. Vichy's journey to success began in the 1840s when the composer Isaac Strauss arrived in 1846 to be the Director of the Vichy Spa Orchestra. This was housed on the upper floor of the Etablissement Thermal where concerts and dancing took place. Renewed interest in the spa town followed Napoleon III's visits from 1861, and after one of these he supported plans for development of the town with the introduction of a casino in 1865. The Emperor agreed that the further aggrandisement of the spa was in the public interest and allocated substantial sums of money for improvement work coupled with commitments from private speculators. The head of the stock company agreed to extend its lease for the privilege of being able to open a new casino. By the 1880s, the town and its spa buildings had become inadequate for the number of its visitors and it was considerably enlarged in 1900 with investment which included the best-preserved theatre in the town with reading and billiard rooms. But only when gambling in casinos became legal in 1907 did it house a gaming room.

Town	Kursaal or equivalent	Theatre	Casino
Baden bei Wien		Stadttheater 1908-09 (4th theatre from 1770) Sommerarena – a summer only partly open-air theatre; This was built on the site of a predecessor in 1906.	The Congress-Casino (also called Kongress Haus or Kurhaus) was used as a Kurhaus (1896-1934) sharing casino and Kurhaus functions
Spa	La Redoubte 1763 (eighteenth century remaining elements lost during WWI) Waux Hall 1770 (A third Assembly Room of 1785 - the Salon Levoz- was demolished in 1904) Kursaal 1908, rebuilt following a fire in 1909	Theatre from 1763 in La Redoute Small Theatre in Le casino Theatre Jacques Huisman 1920-25 in Le casino	Gaming in La Redoute (1763), the Salon Levoz (demolished in 1904) and the Waux-Hall (1770) Casino (1920-1925)
Františkovy Lázně	Assembly House includes Kursalon 1793-94 expanded in 1876-77 by the Conversation Hall (ballroom)	Božena Němcová Theatre	
Karlovy Vary	Lázně III Kurhaus Assembly Room 1863-66	Municipal Theatre 1884-86 Concert Hall in the Grand Pupp Hotel 1905	
Mariánské Lázně	Kursaal (Assembly Hall) 1899-1900 Dancehall and Konversation Room in the Kursaal - inside was a ballroom ladies salon, reading room, writing room and conversation hall and restaurant	Municipal Theatre 1868 (replaced in 1928)	Casino in the Kursaal
Vichy	Établissement Thermal Hall-des Sources	Theatre and Opera 1898 -1903	Casino 1863-65 enlarged 1900-01
Bad Ems	Marmorsaal built 1836-39 includes ballroom, concerts, the kur-theatre on upper floor with reading rooms and concert hall and present casino	Theatre added to Kurhaus 1913/14	Gambling permitted in 1720 but closed in 1874 Extension of concert hall now a casino from 1987
Baden-Baden	From 1766 on a building for leisure activities was build outside the medieval city walls. The actual "Kurhaus" was build from 1821-24 with Assembly Rooms, Gambling Rooms, library, ballroom, theatre and reestaurant. Modified in 1853-54 for the new casi-no it was renovated and enlarged with a concert hall around 1910.	The history of the Baden-Baden theatre dates back to 1810 when a wooden theatre was build, followed by a theatre in the Kurhaus which was demolished for the renovation of the casino in 1853. The actual theatre was inaugurated in 1862 and financed by the Bénazet family.	Since the middle of the 18th century Gambling was common in Baden-Baden and was restricted to inns. A concession was given at 1801 and the Casino installed in the Promenadenhaus then in the Kurhaus. The fame of the Casino started in 1838 with the french leaseholder Jacques Bénazet, whose son Edouard took over in 1848 and commissioned to Parisian architects a profound transformation of a wing of the Kurhaus into Iuxurious rooms from 1853-54. Between 1872 and 1933 gambling was forbidden and the casino once more closed in 1944. Its restart dates back to 1950.
Bad Kissingen	Regentenbau 1911-13	Theatre from 1905 (replaces an earlier building on the same site)	In the casino building in the Luitpoldbad ensemble
Montecatini Terme	Kursaal 1907 alterations 1914-21	Verdi Theatre from 1930, rebuilt in 1981 on the same site	Extensions made to the kursaal to include a casino 1914-21, 1930-81
City of Bath	Pump rooms from 1704 Assembly Rooms 1761-1771 Guildhall 1775-8	After performances in the Lower Assembly Rooms- the Orchard Street Theatre from 1750-1805 now the Masonic Hall Theatre Royal from 1802	

Figure 4: Comparative dates of the Kursaal, theatre and casino construction within the nominated spa towns

Assemblies and dancing

Dancing was an alternative to gaming. However, in most spa towns the two activities took place in the same assembly buildings or casinos as in *Spa*. Magnificent balls and lavish assemblies were the highpoint of the season in *The Great Spas of Europe*. These events attracted the elite of European society and also those who sought to join it. Balls and assemblies were formal events where admission was by subscription and entry controlled so that only respectable people were admitted.

Dancing was an art that was held in the eighteenth century to be an essential social skill. For men dancing was considered to be a manly accomplishment. As well as dancing being a source of physical and mental rigour, it was held then that a graceful and polite manner was an achievement and likely to help meet 'genteel' company. These skills contributed to the development of a polite society and the ballrooms in the spa towns contributed to this. Services of dancing masters were advertised in the City of Bath for the season and several of these offered also lessons in swordsmanship. Dancing lessons were available for children at Vichy and lessons were available for adults who felt they needed help. In the City of Bath, French dancing masters were particularly in demand to teach newly fashionable dances that had been imported from France and these included the 'cotillion'.



Ball room of the Waux-hall, lithographie, Abraham Vasse, 1852. *Spa*

As well as ensuring young girls (and boys) developed confidence and social skills when dancing in company on formal and grand occasions, dancing was held by some physicians as a useful form of healthy exercise and especially for young women who may not be disposed to walking or riding. Physicians in some spas towns held dancing to be part of the cure.

Early spa towns included assembly rooms built with 'long rooms' for dancing. In the *City of Bath*, the Lower Assembly Rooms provided dances twice a week from 1708. After the Upper Assembly Rooms were opened in 1771, the two Masters of the Ceremony arranged for balls to alternate between the competing Assembly Rooms. A 'long room' was built in the Sydney Hotel of 1794 as an added attraction to Sydney Gardens Vauxhall. Dancing and concerts took place in the *Spa* Casino of 1763 and the nearby Wauxhall of 1770.

In Karlovy Vary, the first large ball house, the Saxon Hall was built in 1701 on request of the Saxon elector and the Polish King, Friedrich August the Strong. Next to the Saxon Hall the Bohemian Hall was built before 1715. By the mid-nineteenth century, many other houses with dance halls were constructed in Karlovy Vary. In Mariánské Lázně, the first Kursaal was built right next to the Cross spring in 1826, and another Kursaal with a large ballroom, the Marble Hall, was created in 1868 next to the New Spa.

Some spa towns assumed a reputation as a 'marriage market', and dancing took on an essential role in this, particularly in the City of Bath, Vichy, Karlovy Vary and Mariánské Lázně.

Ballrooms and spaces for dancing were also used for concerts. The Kursaal with Marmorsaal built 1836-39 in Bad Ems includes ballroom, concerts the kurtheatre with reading rooms and concert hall and present casino. Gambling was permitted in 1720 but closed in 1874. Edwin Lee observed in 1840 that the Kurhaus at Bad Kissingen also was the venue for a number of activities for occasional balls and reunions and also for exercise in wet weather. The Casino of 1863 at Vichy was also the venue for the two activities with a ballroom provided above the Casino. Two dance floors were added in the 1950s to the Montecatini Terme Kursaal of 1907. In Baden bei Wien the ballroom in the Kurhaus that had been remodelled in 1934 was returned to its original design in 1999.

Not all dancing was held in public buildings, although the grandest of the balls in Baden-Baden were held in the Conversationhaus. Private balls also took place in villas and large hotels. In Spa dancing took place in the open air in the Prairie de Quatre Heures. The Banqueting Hall in the Guildhall of 1775 was used as a ballroom to house assemblies and balls for the citizens of the City of Bath to hold their own events and be independent of the Assembly Rooms. In Karlovy Vary the Blücher Hall in the Poštovní dvůr (Posthof) of 1791 was one of the most important ballrooms in the town. But later a 'social' and concert hall was built in the Grand Hotel Pupp in 1907. In Montecatini Terme, between 1900 and 1926, balls were held in the Grand Hotel La Pace.

Music

Dancing is accompanied inevitably with music. However, music played a wide and an essential contribution to the life of spas where music was played throughout the day as people bathed, drank the waters, breakfasted and then when they met in the evening at assemblies and balls. Performances by orchestras and bands took place in ballrooms, casinos, pump rooms and also in the open air alongside promenades and in pleasure gardens and kurgardens. Less formal music was provided by local choruses and orchestras with their performances in halls and churches as well as catch clubs and glee clubs singing in taverns and coffee houses. Increasingly music assumed an importance in the life of spa towns but not just for its therapeutic benefits and as an accompaniment to the cure but as one of a number of seductive and entertaining diversions and amusements.

In the early eighteenth century visitors to the City of Bath were welcomed to the city with a brief performance outside their lodgings by the City Waits. The band solicited a tip or sought a subscription that entitled the visitors attending a fixed number of performances during their stay but these delights provided by the band were abandoned after complaints from new visitors. Beau Nash as the Master of the Ceremonies asked for a subscription from visitors to pay for music but he recruited players from London to raise the standard of the indigenous band. A small band played music in the Pump Room in the City of Bath whilst visitors drank their prescribed draught of water. Live music has been played in this room by the Pump Room Orchestra for some 300 years, and concerts have been held here from 1710 (and also in the Abbey and Guildhall) so that concerts have been a regular feature of the Bath season from the 1740s and particularly when no assembly or ball had been programmed.

In *Mariánské Lázně*, the first spa orchestra was already established in 1821; it played directly at the springs. In *Karlovy Vary*, the Karlovy Vary Symphony Orchestra was founded by Josef Labitzky in 1835. It later became a renowned music ensemble performing in many other parts of Europe. The first mention of the spa orchestra and musical events in *Františkovy Lázně* dates back to 1841.

Similar small bands regaled promenades and kurgardens with music. Bandstands were built in parks and able to hold modest bands such as the kiosk in the Parc de 7 Heures in Spa with concerts at 2:30 and 8 p.m. but others pavilions, such as the Konzertrmuschel opposite the Konversationshaus in Baden-Baden, is able to hold a small orchestra. In 1894 the continental premiere of the New World Symphony by Antonin Dvořák was performed at Poštovní dvůr in Karlovy Vary. A small music pavilion of 1894 at Baden bei Wien is a central point in the Kurpark. Nearby is the Art Nouveau style concert hall of the Sommerarena that replaced the earlier structure of 1841. This was built in 1906 with a retractable glass roof so that performances of operettas could be enjoyed under an open sky. Baden bei Wien has an important role on the cultural and musical life of Austria and particularly during the time the Imperial Court had its connections with the town. Beethoven worked and lived in a number of houses in Baden bei Wien and in one he wrote his 'Missa Solemnis' and the '9th Symphony'. After a disastrous fire that wrecked part of the town centre, Beethoven put on a special concert for the relief of those affected and a contribution to the restoration of the town centre. Similar special concerts he put on in Karlovy Vary and Františkovy Lázně. Later, during the nineteenth century, the spa had become popular for light operettas, and the operetta 'Die Fledermaus' of Johann Strauss II has been held to be based on the town.

Spa Town	Composer	Associated work
Baden bei Wien	W. Amadeus Mozart Ludwig von Beethoven	String Quartet No 21 K575 1789 Piano Sonata K576 1789 Clarinet Quintet K581 1789 Ave Verum Corpus K618 1791 Die Zauberflöte K620 premier 1791 Missa Solemnis premier 1824 9th Symphony OP 125 1824 Die Weihe des Hauses Op.113 1822 Les Adieux Klaviersonate Nr.26 Op.81a 1809-10 Wellington's Victory or the Battle of Vittoria Op.91 1813
77 1 77	Johan Strauss the younger	Inspired die Fledermaus 1874
Karlovy Vary	Antonin Dvořák	New World Symphony European premier 1894
Mariánské Lázně	Richard Wagner	worked on Lohengrin
Bad Ems	Léo Delibes Jacques Offenbach Louis Deffès:	Les Eaux d'Ems 1862 La Belle Hélène 1864 Orphée aux enfers, 1858 Le Papillon, 1860 Les Bavards, premiere 1862 La Belle Hélène, 1864 Les Bergers, 1865 Coscoletto, premiere 1865 Robinson Crusoé, 1867 Le Café du Roi, premiere 1861 Les Bourguignonnes, premiere 1862
Baden-Baden	Hector Berlioz Johannes Brahms	Béatrice et Bénédict premier 1862 Trio in E flat 1865 Liebeslieder Waltzes 1869 String quartet op.51 no 2 1873
Montecatini Terme	Guiseppe Verdi	Inspired the operas 'Otello' (1887) and 'Falstaff' (1893)

Figure 5: Spa towns, composers and their associated works

From 1858, Jacques Offenbach was engaged in the summers to be the conductor in the *Bad Ems* theatre and here, in 1864, he composed '*La Belle Hélène*'. He then went to *Baden-Baden* for treatment for gout but was soon employed here as the director of that

theatre. Giuseppe Verdi visited Montecatini Terme regularly for hydrotherapic treatment from 1875 up to his death in 1901. The town is held to have inspired him to write his operas 'Otello' and 'Falstaff', and his affection for the spa is commemorated in the name of the principal boulevard, the Vialle Verdi. The spa attracted an exceptional number of celebrity composers of the belle époque including Giacchio Rossini, Giacomo Puccini, Ruggero Leoncavallo, Pietro Mascagnni, and Umberto Giordano. Celebrity artists visited the town including the tenor, Enrico Caruso, the soprano, Lina Cavalieri and the conductor, Arturo Toscanini. Conductors were held as celebrities as much as musicians and Karl Komzak, Carl Zeller and Carl Michael Ziehr were celebrated conductors of the Baden Kurorchestrer in Baden bei Wien. In the same town Johann Strauß conducted his orchestra at Hauswiese in the Helenthal Valley. Clara Schumann lived in a cottage in the village of Lichtental now part of Baden-Baden. Ivan Turgenev and Johannes Brahms followed to be near her. Brahms inspired perhaps by the romanticism of the place, completed his 'Liebeslieder Waltzes'. Here he completed also his String Quartet op.51 no. 2 and the Trio in E flat. Richard Wagner was enthusiastic about water cures and visited Bad Ems, Karlovy Vary in 1835 and ten years later visited Mariánské Láznê where he made his first sketches of 'Die Meistersinger' and an outline to his opera 'Lohengrin'.

Spa Town	Artists who came to work (and some for curative and recreational purposes).		
Baden bei Wien	Ludwig von Beethoven Johann Strauss the Elder Antonio Salieri Franz Schubert Johann Strauss the Youger Felix Mendelsohn-Bartholdy Conradin Kreutzer	W A Mozart accompanied his wife, Constance, on several visits Christoph Gluck Joseph Haydn accompanied his invalid wife	
Spa	Camille Saint-Saëns Adelina Patti Jean-François Jehin-Prume René Defossez Henri Vieuxtemps Giacomo Meyerbeer	Jacques Offenbach Gaspare Spontini Charles Gounod	
Františkovy Lázně	Ludwig von Beethoven Johann Strauss		
Karlovy Vary	J S Bach Richard Wagner Ludwig von Beethoven Franz Liszt Niccolò Paganini Frederic Chopin Antonin Dvořák Richard Strauss	Johannes Brahms	
Mariánské Lázně	Ludwig von Beethoven Frederic Chopin Gustav Mahler Louis Sphor Johann Strauss Antonin Dvořák	Richard Wagner Johannes Brahms	
Vichy	Pyotr Ilyich Tchaikovsky Jules Massenet Richard Strauss		
Bad Ems	Jacques Offenbach Richard Wagner Léo Delibes Jenny Lind	Charles Auguste de Bériot; Carl Maria von Weber, Giacomo Meyerbeer, Louis Deffès	
Baden-Baden	Hector Berlioz Clara Schuman JohannesBrahms Niccolò Paganini	Felix Mendelssohn-Bartholdy Giacomo Meyerbeer Franz Liszt Jacques Offenbach	

Bad Kissingen	Jenny Lind Gioachino Rossini Marie Wieck Teresa Milanollo Hermann Breiting	Baptist Hoffmann Ralph Benatzky Richard Strauss Johann Nepomuk Hummel
Montecatini Terme	Giuseppe Verdi Gioachino Rossini Giacomo Puccini Ruggerto Leoncavallo Pietro Mascagnni Umberto Giorgado Enrico Caruso Lina Cavalieri Arturo Toscanini	
City of Bath	Thomas Linley Snr Thomas Linley Jnr Venanzio Rauzzini Joseph Haydn William Herschel Clara Schuman Jenny Lind	Handel Francis Hippolyte Bartholemony Niccolò Paganini Johann Strauss Franz Listz

Figure 6: Composers who came to work and take the cure



The Music Pavilion. Baden bei Wien, c. 1898.

Theatres

'Theatres had the power to instruct and improve – a positive public role through the Enlightenment' Van Horn Melton, 2001

Before the early modern period in Europe, theatrical performances, concerts, masques and balls had been essentially the privilege of the Court. Alternatives for commoners were performances by travelling players in inns or the open air and these were restricted by religious observances or licensing measures. As licences were generally relaxed, performances and music became more accessible. Operas and concerts were provided in halls, theatres and pleasure grounds, but access to these events became a matter of ability to pay rather than an accident of birth or patronage.

To attract visitors into staying at the towns for a longer period, a continuous supply of entertainment of concerts, plays and operas was offered and this warranted purpose-built theatre buildings. Most new generation of theatres proved to be large buildings and

appear to be extravagant relative to the size of the town The two following theatres are exemplars of design: The present theatre of 1856-62 at Baden-Baden was built alongside the Konversationshaus and this allowed an earlier theatre in the casino ensemble to be converted for other events. The new theatre was built in a Neobaroque style with outstanding interior decoration. The Opera in Vichy is the best-preserved Art Nouveau theatre in France and was built as part of the casino ensemble in 1898-1903. Alongside the theatre is the Musée de l'Opera and this houses an extensive collection of scores, plays and theatrical memorabilia.



The Theatre Baden-Baden

There has been a continuous sequence of theatres in the City of Bath from 1705 culminating with the present Theatre Royal of 1805. Similarly, the impressive theatre in Baden bei Wien is the fourth theatre to have been built on its site. An analysis of the construction of theatres in the spa towns shows many of them replaced earlier structures or were extensions to casino ensembles. At the same time, this analysis is evidence of general economic and building activity in spas at the close of the nineteenth century and first years of the twentieth century.

The municipal theatre built in Karlovy Vary by F. Fellner and H. Helmer between 1884 and 1886 became a model for constructing other theatres in Europe.

Spa Town	Theatre	Date
Baden bei Wien	Sommerarena built on the site of an older wooden construction from 1841.	1906
	Stadttheater rebuilt on site of previous three theatres.	1908-09
Spa	Theatre rebuilt after destruction of the eighteenth century theatre during WW1	1920-25
Františkovy Lázně	Built on site of old theatre	1928
Karlovy Vary	Municipal Theatre	1868
Mariánské Lázně	Municipal Theatre	1868
Vichy	Opera Theatre in enlarged casino ensemble of 1865	1898-1903
Bad Ems	Extension to Kursaal	1913
Baden-Baden	Theatre replaces an earlier stage in the Konversationshaus ensemble	1856-82
Bad Kissingen	Kur Theatre on site of predecessor of 1858	1905
Montecatini Terme	Verdi Theatre on site of predecessor of 1930	1930-81
City of Bath	Theatre Royal (4 th theatre in the city)	1802

Figure 7: Comparative dates of construction of the theatres

Artists and Celebrities

Spa towns had a capacity to attract patrons of social, political and cultural distinction. Spa towns became fashionable, particularly for very wealthy and influential celebrities in Europe. At the same time artists, writers, playwrights, poets and composers flocked to the spa towns with the intention of securing commissions. Spa towns became convenient places for artists to meet. Beethoven met Goethe at *Karlovy Vary* in 1812 and Dostoyevsky met Turgenev in *Baden-Baden*.

Wolfgang Amadeus Mozart's wife stayed in *Baden bei Wien* to cure ulcers on her leg and Mozart stayed with her. Mark Twain visited *Spa* and *Mariánské Láznê* (1891) where he sought help for an ailing elbow. For him, *Mariánské Lázně* was "the Austrian health factory". Curists did not always just visit one spa. Beethoven visited several places including *Baden bei Wien* and *Karlovy Vary*. Goethe visited *Karlovy Vary* at the same time as Beethoven. Here he made his first sketches for what would become his novel, 'Die Wahlverwandtschaften'. He also visited *Mariánské Láznê*, where he had become infatuated with a young lady, fifty-six years his junior, and died soon after.

Some writers were more settled. Ivan Turgenev lived happily in a ménage a trois with the Viardot family in *Baden-Baden* where in 1867 he wrote his novel 'Smoke'. Another author who did not marry was Jane Austen who lived for a short time in the *City of Bath* and included the city in two of her novels, 'Northanger Abbey' and 'Persuasion'. Another resident of the city who came to the *City of Bath* seeking a cure and stayed (1759-74, living at The Circus) was the painter Thomas Gainsborough. He set up two studios in which celebrities came to have their portraits painted. He became a founding member of the Royal Academy in 1769.

Visiting celebrities included the influential elite, monarchs and rulers. All the spas were visited by kings, tsar, emperors, electors and bishop princes and other nobility. The Emperor Franz I established a summer house in Baden bei Wien. King Edward VII was an enthusiastic visitor of spas and amongst several he visited Mariánské Láznê for nine times between 1897 and 1909 and in 1906 he met his cousin, Emperor Franz Joseph I here. Spa diplomacy enabled powerful rulers who were cousins to talk to each other in comfortable surroundings. This principle was extended to more formal diplomatic meetings. During the Congress of Vienna in 1814-15, Prince Metternich hosted side meetings in his house in Baden bei Wien. Four years later, Metternich, King Friedrich Wilhelm of Prussia and ministers from German speaking states met in Karlovy Vary and from this they issued a series of reactionary restrictions of the Karlsbad Decrees. Leaders of the German states with four Kings, the Prince Regent of Prussia and the Emperor III of France met in 1860 in Baden-Baden at the Congress of Sovereigns. In 1883, King Leopold II of Belgium sought a reconciliation and rapprochement with the Dutch by entertaining King William II of the Netherlands in the Hotel Britannique in Spa. In 1888 Spa hosted the First International Beauty Contest with nine nations represented. The World Zionist Congress met in Karlovy Vary in 1921.

Houses, villas and chalets were temporary homes and salons for Queens and Empresses. In 1817 Charlotte, Queen of George III of England, lived close to Sydney Gardens in the *City of Bath* where she had a town house in which she received visitors. The Empress Eugenie of France had five chalets of 1864 in *Vichy*. In *Spa*, Queen Marie Henriette of Belgium acquired a former hotel as a home from 1895-1902. It is now the Villa Royale.

Sports, horses, tennis, golf, swimming, etc.

Through the eighteenth century, sport evolved in three directions. One provided an organised basis for gambling and these sports include boxing, wrestling, cricket, horse racing and later harness racing. A second, provided exercise and diversions for amateurs and included, fencing, swimming, tennis and golf. Thirdly, during the second half of the nineteenth century organised sport became a spectator event, especially for horse racing, rowing, football and cricket.

Spectator sports were available for all classes and both genders; for example, horse racing was very popular with ladies. Early plans for *Františkovy Láznê* included an outdoor manège in which horses could be exercised. As well as a manège on the common in the *City of Bath*, an exercise ride was laid out on a gravel path around the perimeter of Sydney Gardens. Jane Austen commented on watching the riders so that by the end of the eighteenth century these rides had become a spectator event.



Cycle race, 1894. Baden bei Wien

Historic race courses continue in use within the buffer zones and settings of several 'Great Spas' today, commonly at some distance from the spa quarter due to the space required (for example at *Baden bei Wien* and *Karlovy Vary*). The number of events such as horse races or other sporting fixtures increased with the growth of leisure and particularly with the growing interest of a leisured middle class. Taking part in sports activity was also recommended by doctors as part of the cure, and riding (also swimming and tennis) had been recommended in the *City of Bath* since the beginning of the eighteenth century: patients were encouraged to hire horses from livery stables and ride as part of their cure, others, less able, were recommended to go for carriage drive. The then Bath City Corporation set aside part of the common for exercise rides, and rented part of Claverton Down to allow visitors to ride over this land. It also made arrangements to repay turnpike tolls for visitors on short outings or carriage drives. Riding schools had been established in the City by 1768 and one that had been built in 1777 by a Robert Scrase had a tennis court built alongside.

Two spa towns promoted the construction of sports grounds. In 1868, the municipal authorities in *Baden bei Wien* created a sports ground in a park west of the springs area. In *Vichy*, land on the left bank of the River Allier was developed first for horse racing from 1863 when the Compagnie Fermière rented a 42-hectare plot of land on the Bellerive side of the river. This initiative provided opportunities for a number of sports and these included a hippodrome and velodrome, and to the south of these a golf course. By the end of the nineteenth century, spa managers in *Vichy* had recognised that women were taking part in many activities including pigeon shooting, archery, lawn tennis, golf and rowing; facilities for which continue in use within the buffer zone today.

Spa had two hippodromes including one set out near the Sauvenière springs and was the venue for the first organised horse racing event on the Continent in 1773. In the City of Bath, by 1728, horse racing had become an organised event and this flourished by 1777. In 1791 the event was moved to a new course north of the city on Lansdown with a new grandstand and stables built in 1831. A horse racing course was established in 1858 near to Baden-Baden at Iffezheim and this had been initiated by the owner of the casino concession Eduard Bénezat.

A horse racing track was laid out outside of *Karlovy Vary* between 1895 and 1899 with extensive stands alongside and stable behind. In *Bad Kissingen* an indoor riding hall named after Richard Tattershall was built in 1911 as an equestrian sports ensemble with stables. This building survives as a cultural centre. A tournament place for equestrian sports, with a long spectator stand, was laid out in 1922 alongside the River Saale north of the town.. Later the ground has also been used as an airfield.

Harness racing tracks are included within the boundaries of one of the spa towns and the buffer zone of another. In 1892 a trotting race course was laid out in *Baden bei Wien* with spectator stands and stables on the edge of Pfaffstätter. Here horse racing and dog racing were entertainments on offer. A hippodrome had been laid out close to the Toretta Baths in *Montecatini Terme* in 1914 but the track was transferred in 1916 to a new site south of the railway.

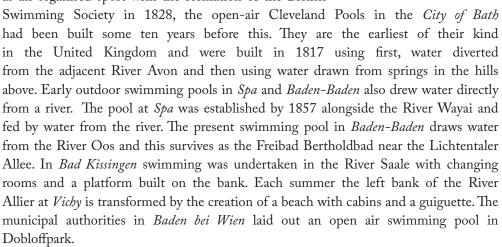


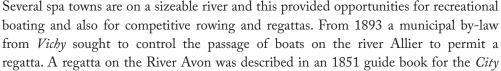
Old postcard showing guests playing tennis. *Bad Kissingen*

Tennis became particularly popular in spa towns. The early forms of tennis endured particularly in France and Britain and evolved into real tennis. In France this was known as *jeu de paume*. But this game had declined in both countries by the end of the nineteenth century. Two tennis courts were built in the *City of Bath* and of these, one survives but has been converted into a museum. Rackets and fives courts were described in the city in a Bath guidebook of 1851. The first tennis club in Germany was founded in 1881 in *Baden-Baden* and is located on the Lichtentaler Allee. In 1887, the spa administration in *Bad Kissingen* laid out the first tennis court in the town, followed in 1889 by the one in *Bad Ems*. In *Spa*, tennis courts had been inaugurated on May 1892 on the Avenue des Lanciers and these courts were the second to be founded in Belgium. In *Vichy*, the first tennis courts were laid out in the Parc des Célestines in 1910. In *Montecatini Terme* the little pavilion and loggia which act as an entrance to the Toretta Tennis courts establishes an elegance to a suite of tennis courts and was designed in 1925 by Ugo Giovannozzi and built close to the Toretta Baths.

During the eighteenth century, a number of medical writers had advanced opinions that seawater bathing had therapeutic powers and potential cures for a number of ailments. After short periods of popularity in the seventeenth and eighteenth centuries, by the middle of the nineteenth century cold water bathing had become fashionable again. Then, large pools and wild bathing in rivers took the place of cold water plunge pools. The

new swimming pools were larger than a plunge pool and were suitable for exercise as well as leisure. Men swam for recreation and spiritual exercise and they were likely to have been inspired by classical examples (Leander) and Roman military training. Woman generally did not swim in public until the beginning of the twentieth century. From 1750 to 1830 swimming was generally regarded as a useful skill or a therapeutic activity and it was not until the late 1830s were early competitive races organised. Although swimming came forward in Britain as an organised sport with the formation of the British





of Bath as one of the many diversions for the city. A rowing regatta has been in existence along the River Lahn in Bad Ems from 1858 with the Kaiserpokel race being contested from 1889 to today. A regatta was held on the Lac Warfaaz at Spa after its creation in 1894.

Golf became a leisure activity during the second half of the nineteenth century and golf courses are associated with many of the 'Great Spas'. The golf course at Spa was laid out at Malchamps, near the Sauvenière hippodrome. Then others were laid out on the edge of the town. King Edward VII was instrumental in establishing a golf club and golf course at Mariánské Láznê in 1905.

Golf emerged in the last years of the nineteenth century as a particularly popular sport with clubs being established in most towns. The Bath Golf Club was founded in February 1880 and plays on a course at Kingsdown outside of the city. An approach course was built by the City Council on High Common adjacent to the Royal Victoria Park in the centre of the City. This is an exception and because of the land required most golf courses are sited outside the limits of the town. Baden-Baden hosts the third oldest golf club in Germany founded in 1901. Its course lies outside



Thermal-Strandbad, 1926.Baden bei Wien

King Edward VII on the golf course. Mariánské Lázné



Golf course, 1929. Bad Kissingen



of the town, however in 1895 the golfspiel was run in Lichtentaler Avenue. A golfspiel was located on the southwest side of *Františkovy Láznê*. However, the oldest golf course in the Czech Republic is at *Mariánské Láznê* and lies outside and northeast of the town. This course was established and opened by King Edward VII in 1905. At *Vichy*, on the left bank of the River Allier, a golf course and clubhouse (designed by Gustave Simon) was built in 1908. Golf had gained international popularity by the 1920s.

Spa infrastructure

In towns with acidulated water, bottling plants were built and these were developed generally after the introduction of a railway. After the arrival of the railways, cheap fuel could be imported so that some spa towns could economically reduce their water to salts and powders and these were sold widely throughout Europe. Representative examples of mineral salts are the Emser Pastillen from *Bad Ems*, pastilles from *Vichy*, and salts from *Bad Kissingen* and *Karlovy Vary*.

Water from the springs at Spa had been bottled from the sixteenth century and was exported to the Court of the French King Henry III. This was exported first for medical reasons and by 1827 some 800-1000 bottles were being exported daily. Water was bottled in the City of Bath by 1673, and marketed in London in bottles and casks. Bottling of Bad Emser had been in place from the seventeenth century onwards. In 1845 580,000 bottles of mineral water were exported from Mariánské Láznê. At the beginning of the eighteenth century, Henry Eyre traded in mineral waters in London where water was brought for sale from the Continent and especially from Spa in Belgium. Eyre claimed that he was the only person to make the sale of mineral waters his only business. He was selling water from Bath and Bristol to many cities in Britain and abroad.

Postcard advertising Emser Pastillen



The arrival of the railways ensured mineral water could be transported widely and cheaply to other markets. These included other spa towns where a range of waters could be bought. For example, by the middle of the nineteenth century in *Baden-Baden* a wide range of waters, salts and whey were for sale in the Trinkhalle. The arrival of railways increased competition between the towns so that whole towns were being promoted as a destination. Bottled mineral water came to be an essential part of the promotion of the resorts of *Vichy*, and *Spa* to the extent that these towns were 'branded' conferring their name on the bottled water. Branding of water and salts was essential to promotion and in some cases the brand of water has become absorbed into language.

The town of *Františkovy Láznê* marketed its water drawn from a number of its springs. Thanks to a technical innovation introduced in 1822 by J. A. Hecht (hermetic filling of bottles without access of air) the export could be strongly increased. A new bottling plant was built in 1872 on the site of buildings that had been used earlier for bottling water. The present ornate single storey building is used to bottle water from several springs and must be unusual for an industrial building to be decorated in an elaborate neo-Baroque style. In *Montecatini Terme* water from various springs was collected and bottled and had been exported from the seventeenth century, but more recently it was

collected and bottled in a more modest building of 1910 in front of the Leopoldine baths. In Spa, up to the nineteenth century, water had been bottled by hand at each of the sources. This included chalybeate water which was bottled in dark glass to prevent iron oxides from precipitating. From the beginning of the nineteenth century developments in pharmacology had led to the development of iron based medicine so that chalybeate water lost its therapeutic reputation and commercial viability. From the 1860s, the resurgence and popularity of Vichy water with the support of the Emperor had affected the sales of Spa water so that the company responsible for its export was reorganised several times. By 1912, bottling was undertaken in rooms below the terraces of the Baths Establishment. A new company, previously called Compagnie Fermière des eaux et Bains de Spa, was established in 1921 à Spa: Spa Monopole. The new company introduced improved marketing and production. Bottling was moved to accommodation in Rue David and then in 1923 to a modern factory near the railway station. The water bottled now is quite different from which used previously in the drinking cure. The introduction to the public of a new natural water of remarkable purity helped to develop the reputation of Spa Monopole: SPA REINE.

Water from *Vichy* had been bottled and exported from the seventeenth century. Louis XV had bottles of *Vichy* water sent to Versailles in 1753 and in 1687 Madame de Sévigné wrote about having bought bottles of *Vichy* water. From 1716, a small sum for every bottle sent from the town was donated to local hospitals and this practice continued up to 1939. In 1844 a deep well had been sunk below the Source Célestines and water from here was the first to be bottled and exported for a mass market. The sources were owned by the state. In 1852, it leased its rights to the water to the *Compagnie Fermière thermale à Vichy*. After his visit in 1861 Emperor Napoleon III was enthusiastic about the benefits of *Vichy* water and this enthusiasm contributed further to the promotion of the water. The arrival of the railway in 1862 further helped the promotion of *Vichy* water after the *Compagnie Fermière* set up new bottling plants along the line of the railway.

Many spa towns extracted mineral salts such as at *Bad Ems*, *Bad Kissingen* and *Karlovy Vary*, and products such as the *Vichy* pastilles were sold to curists also promoted the resort. At *Bad Kissingen* part of the wooden structure that evaporated water to produce Kissingen salts is preserved. At *Montecatini Terme*, the architect Giulio Bernadini, included in his plans for the regeneration of the town, a factory for producing Tamerici salts by the 'Società Nuove Terme'. These salts and mineral water were sold in the spa and from a specially designed booth placed along the Viale Verdi.

In the eighteenth century and the early years of the nineteenth century the diet of people with an income was poor, being mostly of meats and alcohol. For those with no or little income, the diet was worse because there was no nourishment in the food they could obtain. A poor diet had been recognised as being responsible for the poor condition of many of the patients coming to the spas.

One of the *City of Bath's* eighteenth-century physicians, Dr William Oliver, recognised the need to provide a nourishing and easily digestible food for his patients. He produced a biscuit that took his name: 'The Oliver Biscuit'. The Karlsbader Oblaten is the speciality biscuit of *Karlovy Vary*. In *Montecatini Terme*, the Cialde di Montecatini is offered to visitors and also a range of other products including Tamerici salts and Tamerici bottled waters. Biscuits or wafers were produced in many spa towns and are available still.

Advertisement of the hot spring salt produced in *Karlovy Vary*



Marketing, promotion and written material

Apart from these promotional ventures, a new kind of travel book had become popular during the nineteenth century. By 1827 Karl Baedeker had founded his publishing house in Koblenz. His 'Baedeker Guides' soon became a 'bestseller' and the many volumes covered large areas of Europe. In Germany, other editors including Leo Woerl and Theobald Grieben (from 1850) followed Baedeker's example.

To get an overview on the phenomenon of spa towns in Europe it is helpful to consult contemporary guidebooks to health resorts in Europe. In the second half of the eighteenth and the first half of the nineteenth century, guides are mostly dedicated to single spa towns depicting the atmosphere, lifestyle and sometimes even the international standing - with all its various features. In 1734, Les Amusemens de Spa was one of the first examples of this kind of literature and its success is not only shown by an English translation already in the same year but also by other guidebooks like Amusemens des bains de Bade en Suisse [...] in 1739 and Amusemens des Eaux de Bade en Autriche [...] in 1747. Their translations show the international interest in some spa towns in Europe at the time but do not give an overview of the whole phenomenon.

It is in the second half of the nineteenth century that guidebooks appear which depict a very vague conception of Europe "avant la lettre" — including sometimes colonies, but also towns in Eastern Europe with links to Central Europe. They clearly demonstrate that in the nineteenth century, health resorts were perceived as a European Phenomenon: in the search for health, frontiers had to be ignored! Their titles reveal the progress made in medicinal research, the diversification of typology of health resorts and the idea that there was a therapy or cure for almost every disease.

These guidebooks show a clear focus on the local natural resources and their healing potential, paradoxically at a moment when the social role of *The Great Spas of Europe* had already largely usurped their medicinal role. As the guidebooks classify springs, sanatoria, spa towns and other health resorts under the same medicinal approach they do not distinguish spa towns with national or international standing but at least they allow assessment of the number and distribution of European spa towns.

Sometimes indications about the frequentation (number of guests in a year) can help for an orientation. Another difficulty is the tendency to recommend the book of national spa towns to a national audience. Often this is implied in comparisons. Joanne and Le Pileur for example, in *Exposé comparatif des eaux minérales de France et d'Allemagne* promotes, in most cases, French spa towns as being as good as the German ones. But in 1880 this guide is nevertheless the best evidence for the large practice of transnational health trips around Europe.

BADER-LEXIKON

Prets 5 mart.

Robert Flechsig's Bäder-Lexikon of "all known Baths, Wells, Balneotherapeutic establisments and climatic health resorts in Europe and Northern Africa [...]"

Five very representative guides might be considered as examples for a whole genre:

- 1. Armand Rotureau, Des principales Eaux Minérales de l'Europe, published in Paris 1858-64 in three volumes.
- 2. Ad. Joanne and A. le Pileur, *Bains d'Europe*, published in a second version of 1880 in Paris. It was meant as a descriptive and medical guide of the waters in Germany, England, Belgium, Spain, France, Italy and Switzerland written for the doctors and the ill.
- 3. An Album international des villes d'eaux, des manufacturiers du commerce & de l'industrie... réuni à l'Album universel des eaux minérales, des bains de mer & des stations d'hiver, published during the 1880s.
- 4. The *Bäder-Lexikon* of Dr. Robert Flechsig, published for the second time in 1889 in Leipzig as an augmented version depicting the Baths, Wells, Institutions for Water Cures and Climatic Health Resorts in Europe and Northern Africa in medicinal, topographical, economic and financial relation for doctors and those in need for a cure.
- 5. The Health Resorts of Europe. A medical guide to the Mineral Springs, Climatic, Mountain, Sea-Side Health Resorts, Milk, Whey, Grape, Earth, Mud, Salt and Air Cures of Europe" by Thomas Linn, published 1893 in London.

After ten minutes, you forget time... After twenty minutes, the world.

Mark Twain (American writer, 1835-1910) on Baden-Baden baths.

Principal amongst the guide books for the English, were those published by John Murray. The firm published first in 1836 Handbook for Travellers on the Continent. The then up to the beginning of the twentieth century regularly published guidebooks were similar to the 'Baedecker Guides'. The significance of the John Murray handbooks was that they were written for the British traveller and these came to be an essential part of the British traveller's luggage. Other, similar guidebooks for the English traveller included 'Bogue's Guides for Travellers' and guidebooks by Sir Charles Wilson who produced in 1907 A 'Handbook for Travellers in Constantinople Brusa and the Troad'.

In France, Adolphe Joanne founded his 'Guides Joanne' in 1841 and these followed first the routes of the early railways but quickly published 'Les bains d'Europe' in 1860. Joanne sold his company to Louis Hachette in 1855 and the subsequent editions of Guides Joanne were renamed 'Guide bleus'. These focused also on rail-travellers, whereas the 'Guide Michelin' was rather directed at drivers of cars. These ventures underline the importance of this kind of travel literature in promoting the spa towns as destinations.

Novels were also penned in a number of the 'Great Spas'. Notable examples include: those by Jane Austen of Bath - her first and last of six - Northanger Abbey and Persuasion); Smoke, an 1867 novel by Russian writer Ivan Turgenev that is set in Baden-Baden; and The Gambler (1866) by Fyodor Dostoevsky. Other general spa fiction includes works by Henry James, William Thackeray, Edmund Yates, Charles Lever, Paul Heyse, Frances and Anthony Trollope. Poetry is also notable in connection with spas, with exemplar works including that by Goethe and by Viazemskii.

From the 1930s to the present

The impact of the economic depression of the 1930s, the devastation of World War II, and widespread competition from seaside resorts led to a dramatic decline in spa visitors. Until the middle of the twentieth century, many spa towns were generally comparatively small, with later developments commonly separated physically and visually from the spa quarter. Although the 'Great Spas' had undergone some partial changes, alterations and interventions, mostly upgrades and redevelopments in order to keep pace with standards of services and hygiene, all of them remain distinctive in form and spatial layout. They are distinguished by a concentration of carefully renovated buildings that are valuable from the architectural point of view, and which are testimony to a gradual development of balneology and accompanying services. They represent towns that are exceptionally compact in their preserved historic urban structure, and which are integrally linked to the surrounding well-preserved 'therapeutic and recreational spa landscape'. Individual component parts illustrate significant milestones in the scientific, social and architectural development of *The Great Spas of Europe*, but it is the series, as a whole, that is the complete representation of this exceptional European phenomenon.

The spa and state medical systems

After World War II, and with the rise in welfare, spa treatment became commonly available under state medical systems and balneology, hydrotherapy and physiotherapy underwent major developments. Eastern European spas (for example in Lithuania and the Ukraine) were extended and modernised under the USSR's public medical health system. This process also occurred to a lesser extent in soviet-backed socialist Central Europe (Poland, Hungary and the Czech Republic) and West Germany, but also in Western Europe, especially France. In France, spa therapy ('thermalisme') remains emphatically medicalised, with the State still supporting prescriptive spa visits under its social security system. In Germany, integrated health and wellness remains a cornerstone of the federal healthcare insurance, and mineral spas ('Kurort', cure place) retain the necessary medical staff and infrastructure to administer a medical 'cure' prescribed by a physician. The entitlement, usually every three years, is typically a three week stay to either treat a chronic condition or mitigate the development of a potential condition. In the Czech Republic, traditional clinics remain busy with national health clients 'taking the cure' and coming for rehabilitation from illness, so too in Italy where prescriptions describe the illness, appropriate treatment and the anticipated number of consecutive days to take the cure. In the UK, spa therapy has long been excluded from the National Health Service and by the 1950s a number of leading British spa providers declined and were closed (for example in Buxton, Cheltenham, Tunbridge Wells and Malvern). However, some courses of medical spa treatments in Europe (for example the treatment of eczema in France) are actually eligible for funding under the UK National Health Service (provided that area funding is available). In Belgium, during the late 80's The National Sickness and Invalidity Insurance Institution (INAMI) implements budget cuts. Finally, in 1993 the repayment of thermal cures is suppressed as an austerity measure. It is the beginning of social thermalism decline.

The place of thermal medicine in the twenty-first century

Today the resource of *The Great Spas of Europe*, and its contribution to health and wellness and to recreational and cultural tourism, is significant. Spa tourism is a component of health tourism that relates to the provision of specific health facilities at destinations which traditionally include the provision of mineral waters. The World Health Organisation defines health (in its constitution, 1948) in the following way:

"Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity." The pursuit of health is thus central to visiting spas. Today's concept of traditional spa 'wellness', a combination of freedom from illness, a positive state of mind, a healthy lifestyle choice and maintenance of good health remains a niche characterised as a natural and sustainable alternative that contrasts starkly with the vast global pharmaceutical industry (worth over \$1 trillion in 2018).

As opposed to current high-tech medicine (medical imaging, biological and genetic diagnoses, biotherapies, surgical treatments), thermal medicine using a natural medicine might seem outdated. Nevertheless, thermal medicine has evolved from the empiricism of its indications to a medical integration into the multidisciplinary management of chronic diseases.

Enduring cultural heritage

Cultural heritage remains a crucial factor in the protection and management of the 'Great Spas'. Both the socio-cultural fabric and an enduring cultural tradition continue to be cherished by the communities that live and work in these unique places. The essential mono-function of the towns remains sustainable. Responsible management by avoiding over-exploitation ensures that the mineral waters are maintained as a renewable resource. This alternative health treatment method has the added benefit of being seasonally independent; broadly, the spring flows are maintained year-round, and will likely be so on a long-term basis.

The Great Spas of Europe have undergone significant restoration projects and expansion of visitor popularity in recent years, retaining cultural heritage at the core of what makes these places special. They exemplify the European spa phenomenon and continuing culture that combines the therapeutic use of mineral water with entertainment and social activities. There is also a deep understanding of the key role that heritage can play in their future, together with a firm belief in the viability of this continuing cultural tradition.



Bath Thermae