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The long history of the steam bath

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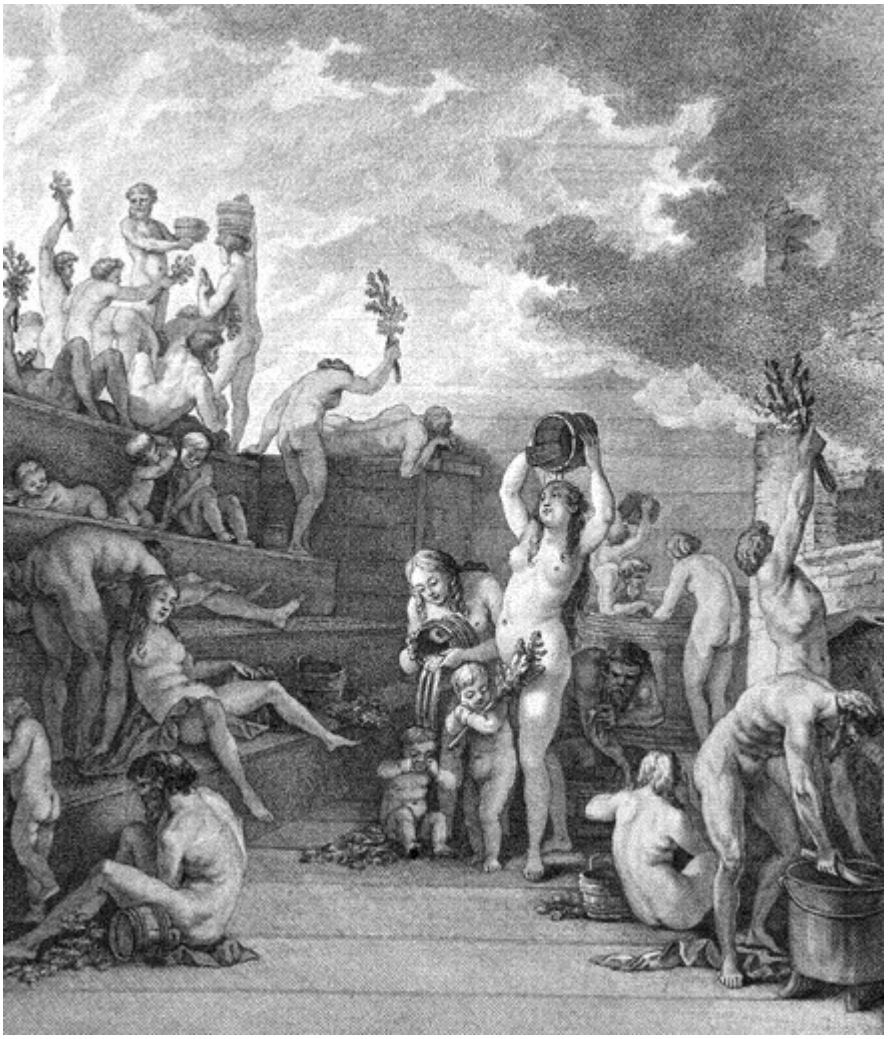

A Public Banja in Russia (1760s)

This writing was translated conscientiously from the original German into English. However, it can happen that due to the multiple use of English words, the content can not be represented exactly. Despite very careful examination, we exclude any warranty resulting from translation errors.

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Content:

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1.0 The long history of the steam bath

1.1 Some conceptual preliminary remarks

Steam baths in this context refer to room baths, in which certain climatic conditions with regard to the temperature of the air and the room boundary walls (serving as a source of radiation) and the water content of the air are to be specially designed and maintained. A special feature is the double meaning of the word "steam". Steam baths belong to the group of heat baths, namely air baths with degrees of heat above the temperatures of the human body, and they are compared with the "dry hot-air baths" of this group. The addition "dry" could be misleading here, which is only to be understood in comparison with steam baths.

The double meaning of the word "steam" (here: water vapour) sometimes causes difficulties of understanding; because atmospheric air practically always contains gaseously distributed water molecules in changing, mostly small quantities. Every visibly wet and even only moist surface, including human skin, always releases water molecules into the air. Especially the evaporation of water from the skin, which is known to cool down and is therefore of great importance for the body's heat balance, is important in heat-air baths, and it distinguishes between different types of baths.

Certain extremes are without doubt the sauna and the "steam bath". The latter is characterised by the fact that the water vapour content of its air is greater than the saturation level, so that tiny droplets (0.01 - 0.04 mm) of liquid water fill the air in a floating state. This phenomenon is also referred to by the word "steam", at least as long as it is warm air; in cold weather we clearly speak of "fog".

Even if the heated air in a bath room is not supersaturated with water vapour, only contains considerably more vapour than under atmospheric conditions (4-5 g/m3 in winter), it is still referred to as a steam bath, e.g. in the case of the Turkish steam bath, which has no visible vapour. The decisive limit is the amount of steam that corresponds to the saturation content at skin temperature (at 30°C skin temperature - randomly - 30g/m3).

When staying in a steam bath, no (sweat) water can evaporate from the skin and cool the skin. This deprives the body of any possibility of defending itself against heat, so that its temperature rises over time according to the temperature gradient between ambient and body temperature. For this reason, it is common practice for all steam baths, whether with or without fog, not to let the temperatures exceed the upper limit of 50°C (which is a particular technical problem for fog baths).

In a dry hot-air bath, evaporative cooling remains effective as long as the vapour content of the air does not exceed the saturation value of the skin. If, for example, the hot storage stones of the stove are sprinkled or doused with water, as is the case with the sauna infusion, this "steam shock", Finnish löyly, interrupts the cooling process and - vice versa - transfers precipitation heat to the body through water condensation. It then depends on the ventilation, i.e. the air exchange and the water vapour absorption capacity of the sauna's wooden walls ("sorption"), how quickly the dry hot air climate is reached again.

As an additional heat stimulus, such an infusion of water is common from time to time during sauna bathing. Sometimes one also experiences such a deliberate increase in humidity when the temperature and heating effect is no longer sufficient when the storage heater cools down. Unintentionally, but inevitably, the steam content rises if a lot of moisture is produced in the room by pouring water over it, rinsing the benches or washing procedures, or if insufficient ventilation means that the amount of evaporation is not sufficiently removed by the bathers (10 g/ min per person). Such reasons may have led Finns to sometimes speak of the sauna as the "Finnish steam bath". For the sake of clarity of terms, to avoid misunderstandings, it would be better to limit the name "steam bath" to the Russian or Turkish bath.

For the classification and evaluation of old forms of bathing, one has to consider the further difficulty that it has only been possible to measure temperatures for 200 years and humidity for 100 years. For older installations we are therefore dependent on descriptions with general information such as "warm", "hot", "hazy". When translating such characteristics from other, especially old languages, differences in interpretation can occur. In Latin, for example, vapor means vapor, haze as well as fire, smoke and simply heat. Vapor solis is the heat of the sun.

This is the reason why Heinz (8) points out that the Laconicum is to be regarded as a dry-hot sweat bath (siccus vapor n. Seneca = dry heat). The Romans called this hot bath Laconicum because the idea had been adopted by the Greeks, the Spartans (Sparta = capital of Lacedaemon = Laconia). Heinz refers to the Laconicum of the Stabean thermal baths. "The form of the room corresponds almost completely to Vitruvius' description: It is round, cone-shaped (not domed) and contained an opening in the ceiling which could be closed by a metal shield (clipius) for temperature control. There are also two other important factors that can be associated with this laconicum: It was not underheated, so it had to be heated by a coal basin in the middle of the room, and the room was dry. Significant ancient sources confirm the dryness of the Laconicum. The circular shape of the room has a special reason: it was to be achieved by ensuring that the force of the flame and hot air coming from the central fire would be reflected evenly from the walls. The overview of the constitutive elements of the Laconicum characterizes it functionally as a dry-hot sweat bath with a sharp heat radiation from the centre". This view is in line with J. Delorme (4): "Le laconicum est une piece... a prendere un bain d'air chaud (non le vapeur)". Also E. Brödner (3) defines Laconicum as a hot-air bath. "Besides... hot-air baths is probably known since the Neolithic period. The Romans adopted both types of bath from the Hellenistic areas, the hot-air bath, which will be described in the following, and the humid sweat bath. Today it is assumed with certainty that the generation of heat, i.e. of dry hot air in a cave or in an artificially created, enclosed space - be it in a tent, a hut or in an oven-like vault - by means of open fire, charcoal embers or highly heated stones and the associated splashing of water or sprinkling of smoke or smoke-causing herbs such as hemp seeds served religious purification rituals.

1.2 Steam baths in antiquity

After these important hints of E. Brödner we now want to approach the history of the steam bath, always bearing in mind possible conceptual delimitation difficulties. The pouring of water on hot or even glowing oven stones, with which invisible steam up to hot fog can be produced, gives the user the immediate possibility to leave it at the hot air bath with "steam push" or to prepare a steam bath in Turkish or even Russian style. As the humidity increases, the heat load on the body increases and the tolerance of the heat will set the limit of steam production at different levels depending on the temperature in the room.

The critical task of the later observer to decide whether it was a dry hot air or a steam bath is only made easier by descriptive clues. Apart from the excavation finds, mentions and descriptions are therefore very important to us, such as those of the geographer Strabo (* 42 a.C.), the engineer Vitruvius (* 25 a.C.) or even much older, were handed down to the Greek historian Herodotus (490- about 420 a.C.). His contemporary Hippocrates (* 450 a.C.) is said to have already recommended the hot-air bath. There are also reports of a change in bathing: Sweating with glowing stones and then a cold bath. Strabo mentions this for the Lusitanians living in the area of today's Portugal. So this custom has reached the western border of the Mediterranean Sea by far, about which we have been told from Italy, Cyprus, Greece, Persia. Erwin (13), who coined the term "stone sweat bath" for this form of bathing, calls it an "ancient cultural asset of almost the entire humanity of the northern hemisphere, dating back to the Stone Age, in the cold and temperate belt. At the time of the greatest spread of the stone sweat bath at the end of the Middle Ages, this belt stretched from Iceland eastwards through northern and central Europe to the Alps, Asia and across the Bering Strait to North America to form a triangle whose base line stretched along the west coast of North America from Alaska to Guatemala, and whose peak was in Labrador, so that Iceland was once again nourished from the west. All cultural levels of very different peoples were represented in it: Stone Age hunters, farmers, city dwellers.

All authors of the history of bathing quote the report of Herodotus of the Scythians, an Indo-Germanic pastoral and farming people in southern Russia, which dates back two and a half millennia. According to the ritual customary among many peoples of having to cleanse themselves after contact with a dead person, they proceed in the following manner: 'They set up three poles, pointing at each other. They spread a felt blanket over them and tighten it quite firmly. Then they throw glowing stones from a fire into a basin that is placed on the ground in the middle of the tent. Then they take hemp seeds, crawl into the tent and throw the seeds on the glowing stones. This produces such a steam (atmida) that no hellenic sweat bath (hellenike pyrie) can stand up against it. The Scythians, however, weep for joy over the steam. They use this device instead of a bath, for they never bathe in water" (9). Mehl refers to the probability that the stone sweat bath was found not only in southern Russia (Scythians), but also in the centre and north (we think of the Finno-Ugric ethnic groups.

"This assumption becomes a certainty when you look at the ethnological news about the stone sweat baths in Asia and North America. The settlement history of North America shows that after the end of the Ice Age (around 10,000 a.C.) the New World was settled by Asia via the only 100 km wide (today still very shallow and frozen in winter) Bering Strait, which was then still a land bridge. The same race of Mongoloid people in Asia and America and many common cultural assets prove the migration. The stone sweat bath is one of the facilities that can be found in the same way on both sides of the Bering Strait. The stone sweat domes are found in Korea as well as in the Aztecs (Krickeberg). The fact that the whole west coast belongs to the sweat bath area, but not the east coast, is also proof that the equipment came from the west. ... "If the first immigrants had already brought the stone sweat bath with them, it would have to be found all over the country. Since this is not the case, it apparently came with later waves, which only settled the west and reached Labrador in the north approximately in the later Stone Age" (15).

The pit hearths are already known from the Neolithic period and suggest that people at that time already used the possibility of transferring heat in stones and transferring it by means of the process of vaporization/condensation. This is because pouring water on the stove stones cools them down because the heat energy was needed to form the steam, and this energy is released again where this steam is deposited, e.g. on the boundary surfaces of a room or, in the case of humans themselves, on their surfaces of skin and respiratory tract.

We read an example of this in the report of an Arab traveller Ibn Dasta who appeared around the year 912. He tells of a country ten days' journey from Petschenegen, where they built earthen dwellings to which they would go in winter and where they would take firewood and some stones. The latter are heated over the fire, and then water is poured over them, from which steam is released, which heats the whole dwelling. Talve (18) says that it is an area on the middle Volga, and Geramb (6) emphasizes that it does not concern Slavs, but murder vines, which belong to the Finno-Ugric peoples.

Another report appeared only 60 years later. The Arab-Jewish doctor Ibrahim Ibn Jakub, who presumably travelled to Merseburg in 973 with a legation from the Count of Cordoba to the German Emperor Otto I, reported from the Slavic border regions of Mecklenburg and Bohemia: "The Slavs do not have baths, but they make a chamber of wood, the cracks of which they plug with moss. In one corner of this chamber they build a fireplace of stones and leave an opening above it to let the smoke out. When the hearth is heated, they block the air hole and close the door. In the chamber are vessels with water, from which they pour water on the glowing stove, so that the steam rises.... They call such a shack itba.'' The word "itba" corresponds in Old Russian to the word istuba, which is also called izba (Kluge-Mitzka, 10), which is connected with stuba (in the Lex Alemannorum, 8th century), and also with the English word stove, French une etuve (sweat bathing room). It is a loan word from the Romansh language and goes back to the Greek word typhos (smoke) and the popular Latin word extufare.

In any case, the fact explains that this form of bathing with hot stones was well known among the peoples of Northern and Southern Russia, and as the Greeks were encouraged to use it. For this, we only have to remember the description of Herodotus already approximately half a millennium before our era. Interesting details could be unearthed by excavations in the present. Heating was done with wood or charcoal, whereby there were (e.g. transportable) coal basins for the latter. A significant progress for heating rooms in massive buildings was achieved by the invention of underfloor heating by means of smoke/hot air ducts under the floors (hypocausten heating). The Laconicum was placed close to or directly above the heating room. From the Greeks, the Romans took over many suggestions for the design of bathing facilities, which was of particular benefit for the construction of public baths. Not long after its first application, the hypocaust heating system was effectively expanded by heating not only the floors but also the walls. By constructing the walls hollow by means of clay pipes (tubuli) or brick plates, the still hot combustion gases spread through these hollow spaces and caused a considerable increase in temperature in the rooms thus prepared on the one hand, and a much better utilization of the fuel on the other" (Schleyer, 17).

Heinz, to whom we owe a thorough overview of the Roman baths, their nature, their development up to the outermost bathing luxury (8), emphasizes repeatedly that the bathing equipment, which is called Laconicum, must have been a dry hot-air bath according to numerous indications, including the heating. However, in a number of thermal baths, e.g. in the bath in Syracuse, he also found forms which, in addition to the Laconicum, "suggest a hot and humid bath". Also for the Greek bath in the facilities at Olympia, which was built much earlier, he considers the heating of a room to be used as a sweat bath "by heated stones, as Herodotus describes as a contemporary custom among the Scythians" conceivable, whereby a clima similar to a steam bath could be achieved by pouring water onto the stones. As far as the thermal baths of Romans are concerned, the increase in their size is as well known as their popularity among the people, which made them a natural institution. Thus it was to be understood that, as testified by written documents and excavation finds, the Romans, when expanding their empire and influence, ensured the creation of such baths e.g. in Asia Minor, in North Africa and finally also in the central/northern European countries they occupied.

By the way, it is most impressive to see from the writings of Brödner (3) and Heinz (8) how many new insights could be gained, especially through the numerous excavations that have been carried out only in the last hundred years. A strong, still growing cultural and historical interest will certainly lead to further work, which should actually be possible with the prosperity and economic situation in our time.

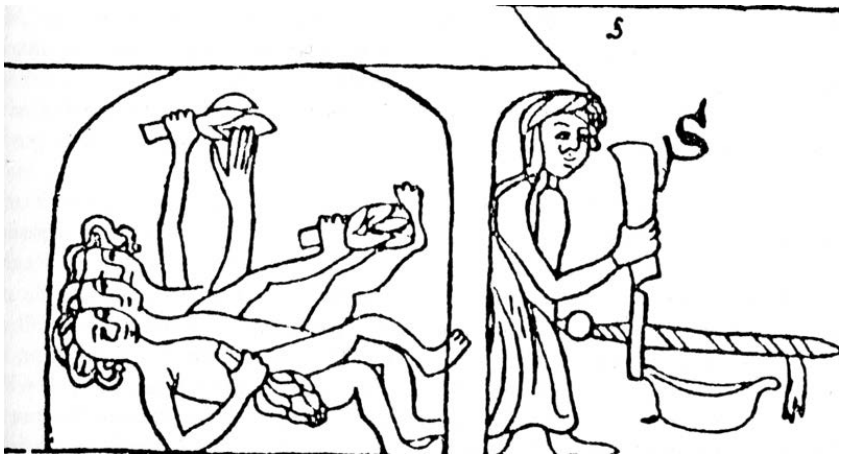

Figure 1:

Bathing room from the Heidelberg Sachsenspiegel, 13th century. The bathers tapped the hot air on their bodies with tufts of leaves; the bathers with the shearing knife are responsible for other services of personal hygiene.

1.3 Baths and bathrooms in the middle ages

In treatises on the history of bathing, a room bath with heated stones is mentioned for man in primeval times, i.e. concerning the way of life in the Stone Age, where the bathing custom was essentially a sweat bath. Two things are emphasized: As far as it is handed down in old writings, heating in such a room is followed by going outside to a water in which one cools down (suddenly). Sometimes there is also talk about snow for cooling. On the other hand it is stated that at that time it was not possible to prepare a warm water bath. As mentioned, there are etymological indications that "bathing" originally meant "warming", which suggests such heat baths of primeval times.

In historical times, such bathing forms were found in heated and more or less humidified rooms. However, the development also led to the use of hot water baths, after this form had been made possible by technical progress. Certainly, since the earliest times it was common everywhere on earth where warm springs appeared (perhaps even mineral springs) to bathe in it. Bathing in rivers, lakes and the sea was probably also an early human habit, especially in the warmer zones, and for northern countries it was used as a means of strengthening the body according to ancient literature. In addition to this "bathing in water", for the countries of our continent the "Stubenbad" is always mentioned, for which there were traditions from primeval times. Both on the individual farmsteads and in closed settlements, such bathrooms were small houses standing on their own. The wooden construction method with its temporal transience meant that, unlike the thermal baths of earlier times, no examples have survived. However, we can learn from the pictorial representations, of which there are a whole series in the form of drawings (even coloured) and woodcuts. The oldest are components of manuscripts named as "Sachsenspiegel" (after the first law book of 1222, of a Saxon knight), which contain a number of drawings as "legal symbols", but apparently also from general areas to represent the living conditions.

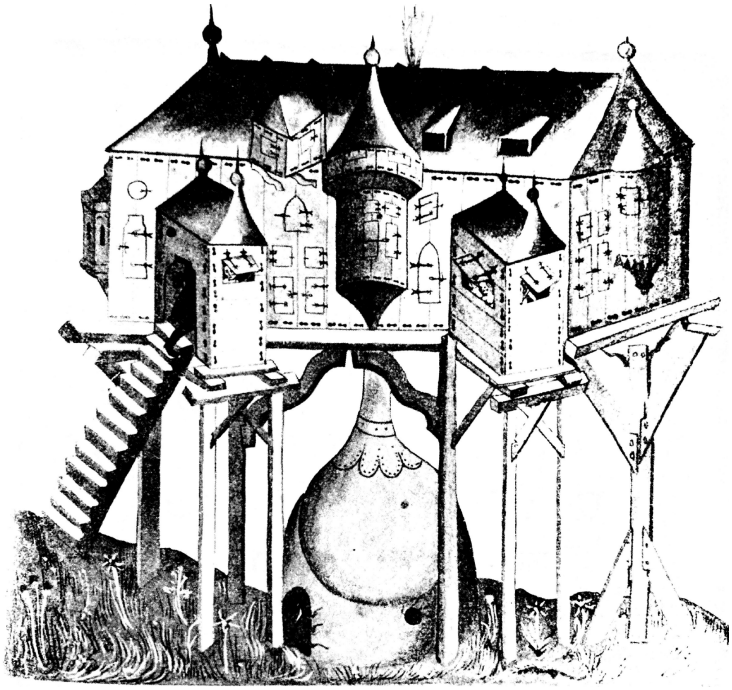

Figure 2:

Steam bath according to Conrad Keyer's "Bollifortis", a pictorial manuscript from 1405. A copper boiler in which the water is brought to boiling point sits on a brick oven under the bathhouse. Through the neck the developed steam is led into the bathrooms. The excess steam escapes through an opening in the roof ridge

Other pictures can be found in book publications dedicated to bathing life, which gave convincing expression to the spread and importance of the baths. Since bathing has also had a cultic meaning from time immemorial and influenced ritual forms, especially since religious founders became strong ' promoters of bathing habits (bathing regulations), it is not surprising that our country had Jewish baths, to which e.g. Ph. von Allendorff dedicated a book "Der Juden Badstub" (1535). However, he added the critical addition to the title: "Eyn Anzeygung Irer manigfeltigen schedlichen hendel" (quoted in Martin, 11). The title woodcut shows ascending benches, which always served to find the higher temperatures above, but does not show any heating. Thus we must leave open the decision whether it was a dry hot-air bath or a steam bath.

The public bath has been widely spread in the cities for hundreds of years, flourishing from about 1200-1500, the first ones are said to have existed before a thousand, about which nothing more is known. Winckler (21) states that in 1489, for example, the city of Ulm had 168 public bathrooms, although he did not distinguish between public and private ones, as wealthy citizens were able to do.
We can also deduce the wide distribution from the words of the South Tyrolean physician Hippolyt Guarinoni (7), who worked in Solbad Hall near Innsbruck. In 1610, he published an approximately 1,400

Folio pages comprehensive health and moral teachings with the title "The abominations of the desolation of the human race" taken from the Gospel of Matthew. Among the vices he also counted the abuse of public bathrooms and said: "Throughout Germany there is nothing more wicked, nothing more familiar, nothing more practiced than this body wrestling with sweat and such mostly by sweat and steam bathing, which the common people and much respectable citizens of all cities consider so strong and so much that they thought they had lost and missed much, if they did not all go to the public special sweat bath on the Saturday before Sunday and all the evening before holidays. Finally he said: "However, because the quite Christian and zealous police cannot be present at all places, I want to write down at least some short bathing rules for the common man". In these rules, which he wrote in verse, he then also warns against infection with mange, the scrawny leprosy or the young French disease (syphilis).

In fact, public bathrooms suffered greatly from the epidemic of communicable diseases, first leprosy, then plague in several epidemics, and finally syphilis at the end of the 16th century. Winckler quotes Erasmus of Rotterdam, who wrote in 1530: "Only 25 years ago, nothing was more fashionable in Brabant than the public bathhouse. Now they are cold-shouldered everywhere, because the new leprosy has taught us to abstain from it".

Figure 3:

Medieval Jewish bath, in which "daring" and "cupping" is done. To indicate that the bath was heated, the "bath tassel" was stretched out. Woodcut 1535

1.4 Steam baths in modern times

Of course, the fact that bathrooms were often used in common and that the formerly taken for granted custom of impeccable behaviour began to suffer played a role in the transmissibility of the latter disease in particular. After the bath had been misused to hold a real feast, some bathers were forced to retreat to another place where syphilis was transmitted. However, the main source of transmission was already recognized by some doctors and it was stated in writings that apparently the disease could be transmitted by cupping, which is usually done with the bath. There were therefore already instructions not to use the devices with which the skin was scratched in order to put on the cupping head afterwards, immediately after the cupping of a sick person afterwards with healthy ones.

Figure 4:
Russian bathing establishment from the governor Yaroslav. Similar to the Finnish sauna houses, the Banja is also built from logs in block construction. As an advance over the "smokehouse", this bath already has a fireplace.

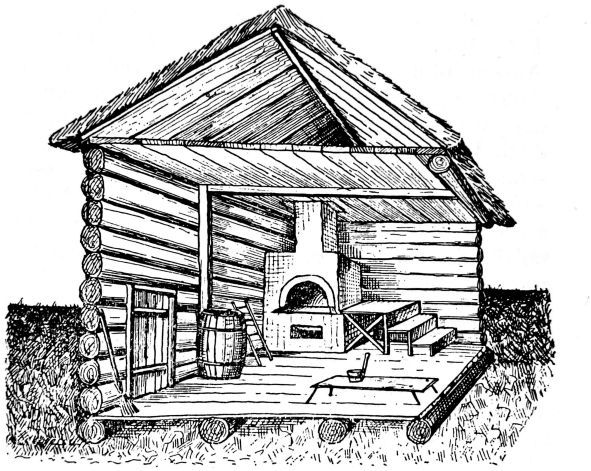

Figure 5:
Interior of a bathhouse half built into the ground. The stove contains the storage stones on which the water is evaporated. Stove plus step bench only take up part of the room. The other shelf is used for pouring off and probably also for getting into a tub of cold water, as the ladder indicates.

Fewer and fewer bathing establishments were able to continue to exist into the 18th century, and a general decline in the need for bathing among the population from the middle of the 18th century onwards has been observed (Martin, ll). Another reason for the decline of the bathing establishments was that the bathers, who were generally tenants of the community and had to pay a rent, could no longer spend anything on these baths when their attendance declined. They were dilapidated in terms of construction and furnishings, which further reduced the interest of the people in taking a bath there.

Martin refers to the derogatory assessment of the bathrooms by doctors, who have often described them as "heated chambers with a disgusting atmosphere, some of which are even said to be underground". This became particularly clear in the work of a doctor in Russian service, Sanchez, who castigated the evils of the German bathrooms and recommended Russian steam baths as a panacea, which all the evils of the German bathrooms should not have. In 1850, a Bavarian city court physician Hirsch demanded the introduction of Russian steam baths and even justified it by saying that "the Imperial Russian Army passing through Germany should be kept in good health" (Martin).

At the end of the 18th century the first steam bath was built in Berlin, about which Bohm (2) reported the following: The first Russian steam bath was built in 1781 by a doctor Uden in Berlin under the name of the English steam bath (because there was one in London before). That this was really the first steam bath in Berlin can be seen from the publication "Nachrichten das zu Berlin angelegte englische Dampfbad betreffend" (News concerning the English steam bath in Berlin), which was published by the owner of this private bathing establishment - the general practitioner Conrad-Friedrich Uden, who lived in the Sydow house on Unter den Linden in 1781. It was built in the house of the factory owner Dittmar at the Graben in front of the Königstore. Uden says: "Those who wish to use the steam bath can come to this house or to my apartment on Unter den Linden in Sydow's house. Since this institution is merely a private establishment (although I have set it up because no such institution was built under the eyes of a doctor), and since there are cases in which the bath, if not harmful, would at least not be beneficial, I must make it a condition that no one is admitted whose condition I have not examined myself and who has not had a conversation with me at the end.

If other doctors consider bathing their patients to be curative, they will oblige me when they inform me of their illness with a short message, since I will not, however, be in line to order the admission to bath.

Regardless of the time of year, which does not matter, nor of the days, all of which, with the exception of Sunday, are to be designated for bathing, the morning is the female and the afternoon is the the male sex. The cost of the bath is determined according to the number of people in whose company you wish to bathe. Wednesday and Saturday mornings are exposed for bathing of many people. The afternoon of these days should remain for the poor, they should be completely free of expenses. What every bathing person needs to dry himself, to lay under his bed and to be rubbed (except for soap and medicine, which will be taken care of by the attentive surgeon), he must buy himself. Most of them should find it unpleasant to stay on a blanket filled with the pathological exhalation of others.

The bathroom is always provided with fresh air, and one should not be afraid to breathe harmful vapours there. A complete protocol is made of each patient, according to his name, age and state; the signs of his illness are told, his present state is described and the whole procedure of bathing and medication is recorded.

As Bohm further reports, Uden's efforts to create a new typeface with the help of the above-mentioned writing, which he even had printed at his own expense in 1781, and the bookshop in Dessau, in the Kaiserl. Addreßcomptoir zu Hamburg and in the Königl. Hofpostamt as well as in the English Steam Bath in Berlin, were not crowned with lasting success. The fact that he himself was also sceptical from the outset is evident from several passages in his "advertising brochure", in which it says, among other things: "Meanwhile, it will depend on whether the public will support me sufficiently to expand my private establishment to the benefit of the general public and individual persons.

In the well-known large "Description of Berlin and Potsdam by Fr. Nikolai" from 1786 and in other descriptions of Berlin from this time, the Uden steam bath is no longer mentioned. It probably no longer existed at that time, otherwise a facility in Berlin, which was unique at that time, would certainly have been listed.

Martin (11) said that it had already been forgotten when a senior Prussian tax official Pochhammer opened the Mariannenbad in Berlin in 1818, where the "first Russian steam bath" was built separately from the usual baths.

Figure 6:

Russian bath. Steel engraving by Henry Winklernach G. Heck, 1849: The image of an informal communal bath. You wash yourself in it and pour (probably cold) water over yourself

Pochhammer published his experiences with this steam bath in a special publication six years later, after having each bather personally record the success of the steam bath in a journal. He reported successes with many even persistent illnesses, especially gout, rheumatism, hearing problems, scrophels, catarrhal head and breast complaints, lichens and many other rashes.

Following the model of Pochhammer's steam bath, a number of baths were built in the following years, for example in 1829 and 1835 by the doctor J. A. Mayer in Würzburg, Dr. C. Barrie in Hamburg, where a steam bath had already been put into operation in Altona in 1826. In 1854 Dr. Barrie published a "Practical Guide to the Most Purposeful Use of Russian Steam Baths in the Alexanderbad Hamburg". J. A. Mayer criticised the term "Russian steam bath" with the comment that "it would not occur to any German to heat his skin, which had been pampered by heat from birth, to the highest temperature in a narrow, dark room with hot vapours in the true Russian manner and then suddenly jump into a cold river or roll in the snow. It would therefore be much more appropriate to call the same Russian steam baths modified in Germany, or simply steam baths, by implying that in German steam baths the degree of heat is set at different levels according to liking, habit, physical constitution, state of illness etc., and that cooling or watering is taken over from lukewarm to cold water, depending on the dietary or medical purpose" (12).

Mayer then reports on the establishment of his steam bath. "The same is located in my garden Kapuzinergasse No. 21, has a pleasant, healthy south-eastern exposure, is directly connected to the lower floor of my house where the various rest rooms are located. In addition to the steam chamber, the facility consists of the lining and drying room and four interlocking rest rooms of different temperatures, which the user can visit one after the other. In the middle of the steam room, along the course of the vault and the entire length of the steam room, there are five terraced benches (estrades), which have raised edges on their edges and several handles to hold the weak sick, then the necessary supports for the head, to which two comfortable stairs lead on both sides. Across the vaulted ceiling runs a cold and a lukewarm water pipe with elastic leather hoses and brass spout pipes, to which sheet metal showers can be attached at will, so that watering in the form of rain, dust, jets or showers can be directed to any part of the body or to the whole body at once. These water pipes are arranged by a special mechanism in such a way that when the bather or the bath attendant grasps a spout and gently lifts it, the water jet suddenly emerges and continues to run continuously until, when the spout is released, its own weight closes the mechanism and thus blocks the flow of water. The steam oven, which runs horizontally on the eastern wall of the steam room, is covered with pebbles piled on top of each other and, after heating, produces the necessary water vapours by pouring water on it, while a steam boiler connected to it produces a continuous stream of hot water vapours...".

We are in the midst of a veritable founding period of steam baths, some of which were founded in conjunction with other medical (tub) baths by private individuals, often doctors. In contrast to the somewhat hesitant announcement we had come across at Uden (whose scepticism was justified, as the short life span of his bath proved), the builders and owners of such baths are more confident about them.

H. Zeise, Altona (22), describes his facilities, initially tub baths (opened in 1822), which he had expanded in 1826 to include a Russian steam bath, in his writing, which he published himself. The actual steam room was large enough to accommodate a three-tiered bench and a rain shower and a plunge bath with cold water on the wall opposite. "In order to prepare the steam bath for bathing, the vapours required for the same are fed in through a tube that starts from the connecting tube of the two steam boilers and is equipped with a tap at its outlet in the steam room in order to regulate the inflow of vapours through it. Before use, the room is preheated for a quarter of an hour to a mean temperature of (in Celsius) 38 °. Then the ceiling would be 50-55 °C hot, while the benches would be 47.38 and 25 °C respectively. "By positioning the tap introducing the steam, these degrees of heat can be increased arbitrarily or, if it is completely closed, they can be reduced very soon. Zeise (who ran a pharmacy on the side) mentions, after describing the recommended handling and reprinting the well-known bath description of Acerbi, an argument about heating and steam production. Many of the builders of new steam baths follow the example of the Russian banya, as you can find it everywhere in the countryside, where in the room itself a wood-burning stove with storage stones is the source of heat, at which the steam in the desired density is produced by pouring on appropriate quantities of water. He mentions (p. 23) that in 1827 published a pamphlet entitled 'Critical illumination of the difference between Russian furnace steam baths and steam boilers steam baths in order to correct some of the incorrect views expressed in public papers concerning this subject' with the Hammerich publishing house in Altona. The later development has proved him right in that in public sauna chambers offered for long hours the steam is prepared outside and introduced into the cabin.

Barrie, a doctor from Hamburg, who had set up a Russian steam bath there around 1846, published a "Praktisches Wegweiser zum Gebrauch" (1) in 1854, in which he dealt primarily with medical issues. In this he criticised ignorance and correspondingly rejection of the steam bath among his colleagues, who certainly found it a challenge to read his "Indications". At the same time he does not hesitate to recommend the daily bath, for the beginner already 25 to 30 minutes of warmth. In many cases, a post-sweat pack of up to 25 minutes is recommended. The bath description mentions, among other things, the three-level bench and the oven with the heat stones on which infusions are made. In this room with a dome-shaped ceiling, the cold rain shower and the plunge bath are located in the middle of the dome. "The more powerful the stove is, the greater the water pressure must be at the fall bath and the rain bath; for if the bather is strongly penetrated by the heat and the rain or the fall is too weak on him, an excess of bathing heat remains in the body, so that the healing effect of the steam bath, which consists solely in the correct balance of heat and cold, is completely lost".With the brief description of his bath, he wanted to "make the uninformed aware of the difference between a truly good steam bath and a hot bath; a steam bath designed without any knowledge of physics will never provide the benefits one expects". The advertising character of this writing cannot be overlooked.Martin (11) mentions, by the way, that the Barrie's Alexanderbad in Hamburg also contained a Turkish bath with fragrant vapours.

After Martin had criticised that it was almost an addiction to call old German bathing methods by foreign names, he mentioned the "Roman-Irish bath". "From Great Britain we also had to get the second form of the old German bath, the hot-air bath with pouring over, under the name of the Roman-Irish bath. The Irish doctor Barther built the first 'Roman-Irish bath' in St. Annshill near Cork in Ireland in 1856. As an innovation (?), he added sprinklings at the end, whose degree of heat gradually decreased. The first such institution was created in Germany by a Dr. Luther in Nudersdorf near Wittenberg in the 1960s.

The decline of the bathing habit, which was mainly caused by infectious diseases and less by the influence of the church, was regretted especially by doctors at the beginning of the 19th century. However, their writings (Hufeland and others) did not reach the population. Apart from the farmers, it was above all the workers in the emerging conurbations of industrial development who were to be addressed. On the other hand, appropriate facilities were lacking, because the remaining bathing establishments were mostly only "dark narrow holes for sweat bathing" (Wetzler, 20). At the urging of doctors, the communities and individual factories finally took up the cause, and around 1850 the first "washing and bathing establishments" were built. They were primarily water baths (tubs and showers), and it took almost half a century before covered swimming pools and finally "steam and sweat baths" were added (1885 Magdeburg). Shortly before the last turn of the century, a series of "bathing halls" were built, in which the connection with a (laundry) laundry was abandoned, but the addition of sweat bath departments to the bathtubs and swimming pools was started. Since the heating of the buildings and the water was done with coal-fired (high chimneys!) steam boilers, one heated so called "steam boilers". "Sweating baths" and a "steam bath" were also heated with steam, which was allowed to flow out freely in the latter to create the fog atmosphere. Schleyer (17) reports with plans of bathing facilities that were built in Germany, England and Austria at that time.

Although it had turned out that the installation of "sweat baths" was particularly costly due to the exposure to higher and higher temperatures, high humidity and the accumulation of water, and their operation was "not very profitable" due to the high costs and relatively small number of users, it was believed that the simultaneous provision of warm, hot dry air rooms and a steam room could not be dispensed with. Thus, the sweat bath department became the most expensive part of the bath facilities, which required large subsidies despite the relatively highest user price. As far as the type of use in terms of bathing sequence, temporal extensions ("dosage") was concerned, one felt completely in the dark, because nobody had taken the trouble to investigate the physiological effects on healthy and especially sick people. This is still the case today, where some of these "sweat baths" are still in operation in municipal baths.

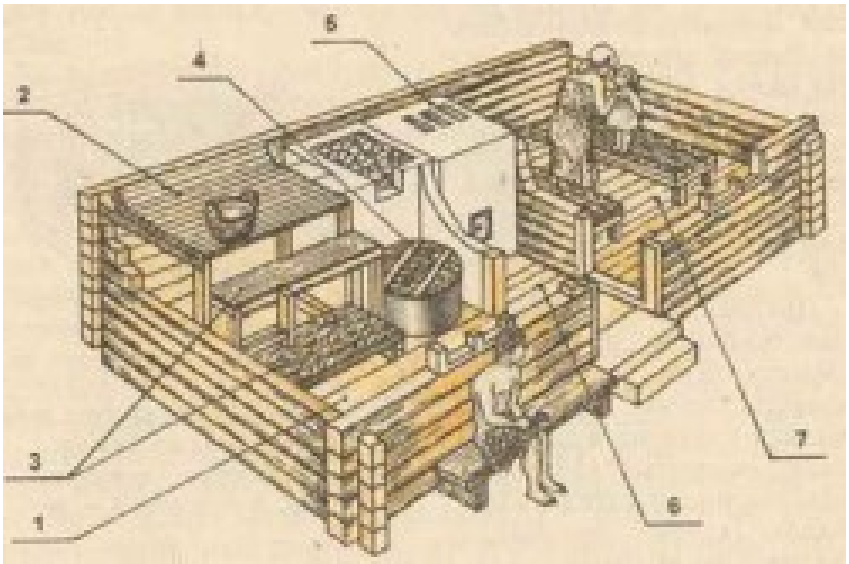

Figure 7:

Family Russian bath: 1 - steam bath; 2 - shelves; 3 - clean benches; 4 - water tank; 5 - oven; 6 - waiting room; 7 - hall.

1.5 The yield of the historical consideration

History shows it - the present confirms it: Bathing is always considered one of life's comforts, be it in the original sense of the word - warming -, be it as refreshment with water games and swimming, be it in an artistic combination of both. The goals pursued by bathing appear to be manifold: from the need for cleansing to the fulfilment of ritual commandments, from personal hygiene to specific healing measures, from relaxation after stress to merely a pleasant pastime. The variety of forms, but also their changes in the course of history, allow us to see what everything but the goals can influence, for example climate, standard of living, tradition, changing tastes, commercial thinking and much more. In the case of heat-air baths are essential distinguishing features: Temperature and water vapour content of the air in the bathing room. The way the body reacts gives them their common name: sweat baths. The scale of variations is limited on the one hand by the sauna with 100 °C at optimally low water vapour content, on the other hand by the banya, the Russian steam bath, temperatures not exceeding 50 °C and steam-saturated air. Conditions of the oriental baths (Hammam) lie in between. After the bath room, for which a climate similar to the sauna is assumed, became extinct in Germany, and the population's need for bathing had fallen to a low point (18th/19th century), doctors tried to revive interest in bathing with writings. The memory of the bathhouse had apparently died out, and the Russian bath was recommended. In particular, public steam baths set up by doctors themselves had only a short lifespan in each case: reasons for this include the recommendation writings: complicated handling and overdoses as well as exaggerated promises of healing. In addition, their use was so expensive that the general population was excluded.

When increasing industrialisation and growth of cities forced local authorities to build baths, many also included sweat baths. They believed that they could only fulfil the task with combined systems. The exposure to such cumulative heat effects prompted renowned doctors to issue critical statements. More recent recommendations, where several "heat sources", sauna, steam bath, pool, are offered, therefore always correctly emphasize the alternating stimuli hot and cold and demand to start a new heat effect only after reaching normal physical conditions. As never before, a reasonable dosage is advised. History has shown that over thousands of years, with the Russians until today, the steam bath has proven itself to satisfy the needs for care, relaxation and health. In the same way, the sauna has proved its worth to the Finns without interruption to this day, as it has done in half a million households and in public baths for millions of people. No Finn shows a need to add a steam bath to his sauna, just as the Russians do not want to add a sauna to their steam bath. If, on the other hand, for reasons which are not discussed here, we have a steam bath in public baths in addition to a sauna, it is important to avoid the mistakes we have made in looking at history. That is why today we mean "If steam bath, then (but this time) right!

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