

HISTORICAL DEVELOPMENT OF THE HOSPITAL SYSTEM IN GERMANY

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ABSTRACT

Hospitals in its true meaning did not exist in ancient civilization or in Middle Ages. The thought of caring the old and weak started with the advent of Christianity. The Biblical stories generated interest in providing asylum for the sick. In the Middle ages the monasteries remained the only repositories of medical tradition in Europe. The monks cultivated medicinal herbs and the cellarer prepared medicaments. Typical for Germany and still existant is the famous hospital in Bernkastel-Kues on the Moselle river, founded by Nicholas of Cusa in 1447. The knights returning to Europe from crusades introduced hospital system. The hospital at Goslar founded in 1254 is a half-timbered construction which is common in Southern Germany in contrast to brick construction prevalent in Northern Germany. During the period of secularisation many monasteries turned into barracks or mental asylums. One of the largest hospitals of the 16th and 17th centuries is the Julius Spital in Würzburg, which was restored after the war and still stands today.

With the advent of Enlightenment hospitals were built for teaching military doctors and medical students. There were special hospitals for infectious cases particularly on islands called lazarettos—Plague houses were built and leprosy committees were formed. Mental patients were lodged in prisons along with criminals, but later were treated as sick people. The numerous foundling hospitals were social institutions rather than medical. In 19th C. in Germany the dissolution of the monasteries left a certain vacuum as far as hospital service was concerned. In 1830 Theodor Fliedner founded a society for helping young girls released from prison or ill and this society in a short time became world famous movement of Protestant Nurses. Along with denominational hospitals, municipal hospitals were also established in 19th C. Lastly the development of hospitals in 19th & 20th Century is described briefly.

One of the best known German dictionaries defines a hospital as "a single building or a group of buildings in which the sick and the injured are accommodated and given medical treatment". If we accept this

definition, we must agree that in general neither in the high civilization of the ancient Egyptians nor in the medical practice of the Babylonians and Assyrians nor in the time of the Greeks and the Romans nor in

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the Middle Ages did such special institutions exist. For although undoubtedly it was with the advent of Christianity that thought was first given to the task of accommodating and caring for the old and the weak in special homes dedicated to this purpose, it is also clear that in these early hospitals very little attention was given to curing bodily ailments. Social concern was directed primarily towards taking in pilgrims or those who had suddenly fallen ill and above all accommodating the elderly in a "xenodochium," or guest home, where they were fed and cared for and given spiritual comfort.

Whereas in the ancient Greek world such charitable institutions were completely unknown, so that a person falling ill away from home could only hope to receive help from his host or a stranger, and an ill person at home had to remain there and be visited by a doctor (who only very seldom took a patient into his own home), there were in the Roman Empire a number of places of medical treatment, called "valetudinarium" (derived from *valetudo* = health), which could take care at least of some patients. In ancient Greece the doctor, the philosophic physician, was highly esteemed by all strata of the population whereas in ancient Rome he fell rapidly in popular esteem. However, the Roman military administration placed great value on having soldiers treated by military

doctors, whose work at a casualty clearing station is depicted on *Trajan's Column* in Rome. In Roman times military hospitals were to be found only in the provinces where soldiers were stationed to keep the hostile population in check. In the homeland such hospitals were unknown, since the returning ill or injured soldiers were cared for privately. A number of such military hospitals were built by the Romans in German-speaking areas, most of them in the architectural style of a Roman house with its central hall, or atrium. A good example is the *Valetudinarium* near Carnuntum, today the Petromel in Lower Austria. At *Neuss am Rhein* in the vicinity of my home town Dusseldorf the ruins of a very impressive valetudinarium, constructed around 50 AD, have been uncovered. Here we have the typical layout of service and treatment rooms, living quarters for hospital personnel, and hospital rooms. Some of the hospital rooms in a valetudinarium were small accommodating one to four persons, others were large wards. These hospitals were usually located near the Roman frontier walls, or *limes*; they were always inside fortress grounds close to one of the main gates of the fortress.

The Greeks and the Romans were without pity for the sick, but with the advent of Christianity, with its leaning towards *misericordia* and

caritas, compassion and brotherly concern, this general attitude towards the sick gradually changed. The tales of healing contained in the Bible have been depicted on the walls of many German churches in the form of picture bibles. Examples are the healing of a person afflicted with *dropsy* (depicted in a church on Reichenau Island, Lake Constance), the famous story of the man that was *palsied*, who was let down through the roof and healed by the word of Christ, and of course the parable of the good *Samaritan*, who came upon a stranger lying on the wayside who had been seriously injured by robbers, brought him to the nearest inn, and cared for him until he recovered. These and other *biblical* stories gradually generated interest in providing asylums for the sick and injured. Around 330 AD Basilios of Caesarea in Asia Minor (Saint Basil the Great) established a number of charitable institutions for pilgrims passing through, and undoubtedly the gradual appearance of hospitals stemmed from this first initiative. The monastic orders placed great value on maintaining special rooms in their monasteries to treat their sick. A famous *layout* plan for a monastery in *Sankt Gallen* in Switzerland, dating back to 820 AD, apparently never executed, shows an "*infirmarium*" with an adjoining Chapel, a room for the doctor, a pharmacy, a small cabin for bloodletting and purgation, and even a small

garden with indication as to where each of the various healing herbs could be planted. Also included in the plan was a small pilgrim's house outside the enclosure where sick or infirm travellers passing through could be taken in and cared for.

After the great population movements in Europe in the Middle Ages the monasteries remained the only repositories of medical tradition. The monks, who of course were fluent in Latin, collected and copied old codices and also raised in their *gardens* herbs known since ancient times to have a healing effect. The cellarer (cellarius), in charge of provisions and wines in the monastery, took over the task as "apothecarius" of preparing medicaments with the help of wine and distilled alcohol and disbursing them over the counter to sick monks, sick persons living in the vicinity of the monastery and travellers passing through. The Order of Saint Benedict, with its famous monastery at *Monte cassino* Italy, constructed in 529 AD, was exemplary in its care of the sick. Benedictine rule, a system of monastery regulations, which nearly all later monastic orders took over, expressly stipulated that the monks should care for the sick as though Christ had entrusted them to their care. One of the *seven works* of charity so highly honoured in Christianity was the care of the sick, and so there gradually developed above all

the monasteries, in addition to the facilities for the care of sick monks, special hospitals serving laymen and pilgrims.

The words 'hospital', 'hôtel,' in French, is derived from the Latin word "hospes" meaning guest. The interiors of these early hospitals have been depicted in many art works of those times. These hospitals were of course often overfilled so that not seldom there was more than *one patient* to a bed. The patient slept naked, nightshirts not yet being known, and infection was rampant. The first actual hospitals built specifically to accommodate the sick in large numbers retained the monastery layout. Monks and nuns served as nurses. Typical for Germany and still existent is the famous hospital in *Bernkastei-Kues* on the Moselle river, founded by *Nicholas of Cusa* in 1447. Most of these hospitals were only one or two storeys in *height*. They had one or more large sick wards which could accommodate a large number of patients. Each ward had an *altar* at which mass was said every day, the monks and nuns being concerned more for the souls of their patients than their physical well-being. Medical treatment left much to be desired. Also important were the hospital churches, which often formed the central point of the hospital complex.

With the advent of the orders of knighthood *the knights* also began to

care for the sick, and to this day the Catholic Order of the Knights of Malta and the Protestant Prussian Order of Saint John of Jerusalem are still tending the sick. The knights *took in even the poorest* of the poor in their hospitals, and the hospital of the Knights of Malta at Valetta on Malta was renowned throughout the Occident.

We must not forget that at the same time as hospitals were being founded throughout Europe to care for the sick, the *Islamic* Orient already had excellently run hospitals, many of them specialized. Under the influence of Islam, a faith which also called for charity towards others, genuine medical centres with special departments for Women's diseases, eye diseases, and mental diseases sprung up. The Arab hospital in *Caesarea*, founded about 1205 AD, and the *Muristan in Cairo*, founded in 1285, are, along with many other hospitals of that time, still living testimony. The importance which the Islamic world placed on the art of healing is impressively expressed in the famous advice of Islamic men of learning according to which one should never live in a country where four things failed, namely, a just government, effective medications, running water, and a skilled doctor. I would like to quote here words spoken by Al Mansur at the inauguration of the Cairo hospital in 1283, as recorded by a chronicler:

"As the building was completed, Al-Mansur had a goblet of wine brought to him from the hospital, drank therefrom, and spoke: 'This I have built for my equals and for those who are less than I. I have dedicated it to the ruler and the servant, the soldier and the nobleman, the great and the small, the freeman and the slave, men and women. I select the medicaments, the doctors, and all else. Whoever is ill and in need of medical care shall have male or female nurses in attendance and receive treatment. I shall determine what *moneys* these nurses shall receive for their service. Each class of patients shall have a special place. I designate four halls of the hospital for those who suffer with fever, one inner court for those who suffer from an eye disease, one for the wounded, one for those suffering from dysentery, and one for women. Running water is supplied at all these places. There shall be one special room for the preparation of food, one for medicaments, and one for mixing balsam, salves for the eyes, and the like."

There is no doubt that the knights returning to Europe from the crusades introduced these interesting and unique hospital models in their homelands and thus decidedly in-

fluenced the development of hospital care. Many of the hospitals in Germany bore the name "Heilig-Geist-Spital," or Hospital of the Holy Ghost. Even today there are many hospitals in Germany bearing this name. The most famous is the *Heilig-Geist-Spital in Lubeck*, now used as a home for the aged. It was built in 1287. The three naves housed large hospital wards, divided today into small alcoves. Services were held in the vestibule, where the pulpit is still to be seen. This Hospital of the Holy Ghost was founded not by monks but by the free imperial and Hansa town of Lübeck, which enjoyed practically autonomous administration. A Hansa town usually located its hospital near the town wall. Through an outside gate in the wall persons in the vicinity suffering from an infectious disease could be brought directly into the hospital, thus avoiding the *spread* of contagion in the town.

Whereas in northern Germany brick construction was preferred, in southern Germany half-*timber* construction enjoyed great popularity. Many hospitals still in existence, such as the one in *Goslar* founded in 1254, that in *Schwäbisch-Gmünd* of the same period, and that in *Rothenburg ob der Tauber* are half-timbered. The general hospital of *Paderborn*, on the other hand, was not newly constructed but rather housed in existing monastery facilities located in the centre of the town.

The old university town of Tübingen is the site of the famous "*Bursa*" or residence hall for the students, which in 1802 was turned into an university hospital, the first of its kind. Later on it was used as a dental clinic.

Following the confiscation of the landed property of the church and the expulsion of the monks from the monasteries during the period of secularization, many monasteries were turned into barracks or mental asylums. A number of psychiatric hospitals are still located in former monasteries. The outstanding examples are the hospital in Zwiefalten and that in Weissenau in southern Germany and the hospital in Siegburg in western Germany.

We have seen that in the first period hospital construction was undertaken by the orders of knighthood and the monasteries; the hospitals, like the monasteries, had inner courtyards and cloisters, a church, and huge wards in church-like naves with an altar in each ward for the patients. In the second period hospital construction was undertaken by the emerging towns. The town administration undertook to build smaller hospitals near the town wall or on the bank of a river flowing through the town, as in Nürnberg. These hospitals no longer had a church; for religious purposes a small chapel was sufficient.

With the advent of absolutism

the German sovereigns began to turn their attention to Hospitals, building enormous health care facilities exemplary for that time which were intended, like their castles, to bring undying fame to them.

One of the largest hospitals of the 16th and 17th centuries is the *Julius Spital* in Würzburg, which was restored after the war and still stands today. Nobody interested in the history of hospitals should fail to visit this particular example, which offers an excellent opportunity to study a hospital from the absolutist period. At one time these hospitals were modelled on either the great baroque castles or the barracks of the sovereigns. As a rule the hospital consisted of colossal two or three-storey building with large inner courtyards, sometimes beautifully laid out as gardens. The Julius Spital in Würzburg also included a *pharmacy of great artistic beauty*, which is still in existence, and an anatomy building in the second inner courtyard, which today houses the Institute for the History of Medicine. The building of the Spital began in 1576, since when it has been converted and extended several times. To secure an income for it, Prince Bishop Julius Echter von Mespelbrunn provided it with the best *vineyards* in the region, a practice typical for many of the hospitals in Germany and France. Thus not only did the patients receive a daily ration of wine but the profits from the excell-

ent wine covered most of the costs of the hospital. Even today both the old spitals in Würzburg, the Julius Spital and the Bürger Spital, which is reserved mainly for old people, maintain wine taverns which sell nothing but their own wine, the famous Bocksbeutel. The hospital administrations could not rely on permanent grants from the town council or the ruling sovereign and were therefore given over large estates, sometimes also forests, to administer. Thus they needed highly experienced administrators who could make a profit for their hospital from the land entrusted to them. It should be remembered that at one time in Germany patients were not required to pay for hospital treatment, although there were a large number of people who donated beds or *benefices* for the hospitals, often in their wills.

The present class system in hospitals, introduced in Germany towards the end of the 19th century, in some parts not until after World War I, was unknown. Well-to-do patients preferred to be treated at home by doctors they trusted and by hired nurses. Hospitals were shunned because of the risk of infection, the mortality rate being far higher there. Thus at that time hospitals were really *refuges* for the poor and lonely. Only this fear of the sometimes fatal infections caught in hospitals explains why such a notable German surgeon as *Theodor Billroth*, known through-

out the world as the founder of German surgery, warned as late as 1865 against admittance to hospital in the following words:

"A hospital should be chosen only as a last resort. Even a separate room in a hospital is not as good as a room in a private house of one's choice. Whoever must deviate from this principle for whatever reasons is in a bad situation."

While in the period of absolutism in the Catholic South of Germany the hospitals were castle-like edifices designed to satisfy the lust for glory and splendour of the sovereigns, their founders, the new institutions in the Protestant North tended to resemble barracks. A typical example is the *Berlin Charite*, which is today situated in the eastern sector of the divided city near the demarcation line. As indicated by the French name "charite," the idea of building this hospital complex, which later became the University Clinic, originated from France. Intended primarily for ill and wounded soldiers, it also accepted the poor and in a separate department treated prostitutes suffering from sexual diseases. Right from the beginning it was intended to extend the building as a teaching hospital for military surgeons, as can be seen from numerous *prints* of the time.

With the advent of the Enlighten-

ment hospitals were built no longer for the glorification of their sovereign patrons but rather for the teaching of military doctors and later medical students. The most shining examples are two Viennese clinics. The first is the General *Hospital* which was established in 1784 at the instigation of the Court Physician Vanswieten and is still in operation today. The novelty of this hospital was an administration wing situated within the first inner courtyard and a "Narrenturm" (mad-house) outside the grounds. The second example was the "*Josephinum*", an academic teaching establishment for military doctors, founded in 1785 in the reign of the Austrian Emperor Joseph II, one of the most outstanding monarchs of the Enlightenment. Today it houses the richly endowed Institute for the History of Medicine of the University of Vienna.

Besides these general hospitals in which, with the exception of the academic hospitals, medical care lagged far behind nursing care, there were also special establishments for the isolation of infectious cases and also for patients who were then considered to be a public danger. Everybody has heard of the *plagues* which swept through the whole of Europe in the Middle Ages and at the beginning of the Renaissance. There are innumerable pictures illustrating the technique of *incizing* boils. This poster shows the quarantine measures applied to isolate a house where the

disease had struck. But the need to build special establishments, so-called "*plague-houses*", outside the towns soon became apparent. These tended to be very turbulent on account of the high mortality of this acutely infectious disease. If possible these houses were sited on *islands*, making it easier to carry out the isolation measures. The numerous quarantine hospitals in Mediterranean ports, which were normally termed "*lazarettos*" (whereas north of the Alps the term "*Lazarett*" denoted a military hospital), are not found in Germany, because the German ports had no direct trade with the Mediterranean *Levant* coast, the goods generally being transhipped in Portuguese or Flemish ports and transported to the German ports in German ships. With the exception of the plague hospitals mostly on the islands, it was not until the outbreak of cholera in Germany in the 19th century that special quarantine establishments were built to combat this disease.

After the plague a second epidemic, *leprosy*, came from the East and continued claiming victims until the 18th century. It caused the authorities in the affected towns to form *leprosy committees* composed of medical officers whose job it was to make final diagnosis of the disease. For the patient this meant immediate expulsion from his community and admittance into a special "*leprosarium*" or leper house normally out-

side the town. The lepers were allowed only on certain days to return to the town or town gates to beg and were obliged to wear special clothes and carry a *rattle* or horn to distinguish them. They were not allowed to go to church and could receive *confession* and absolution from a priest only in the open. The priest used to listen to the confession from a suitable distance, holding a handkerchief soaked in disinfectant in front of his mouth. Most of the leprosariums were situated by the side of main arterial roads because the lepers, rejected by society, were often forced to beg for their living. In South Germany they were often called "*Gut-Leut-Hauser*" (good people houses), this positive term being chosen in an attempt to counteract the curse inflicted on the house by the supposedly bad and dangerous lepers. The Gut-Leut-Haus in the old South German university town of Tübingen, used today as an old people's home.

Particular problems were presented by the mental patients, who for centuries it was believed were possessed by the devil. Priests therefore *attached great importance* to trying to exercise the devil, deranging the patient's mind. If this failed, the raving lunatics were suspected of malevolence and locked up with criminals in prison. Typical for this type of thinking is a board in the present prison in *Celle* which states that the prison admits criminals and lunatics, both groups

being mentioned in the same *breath*. The gable of the mental asylum in *Hertogenbosch* in the Netherlands is also a clear illustration of what used to happen in these institutions. On Sundays visitors were able to pay to gape at the mental patients, generally chained up, in their bare cells. Even as late as 1835 the famous German painter *Kaulbach* depicts a scene from a mental asylum in Düsseldorf, which illustrates how the orderly shows no concern at all for the mental patients but passively contemplates all the uproar, with his bunch of keys in hand.

It was not until the French Revolution, with its attempts to establish proper treatment for the mentally sick, and the freeing of mental patients from their chains by the French psychiatrist *Pinel*, that new impulses were felt in the field of psychiatric care. From now on the insane were regarded as sick people, although the strange shock therapy—*shower baths*, shock immersion *in water*, swinging, and *swivel chairs*—which was recommended at the time as the best cure seems incomprehensible to us today and doubtlessly had a drastic effect on the patients. Gradually these treatments were refined into the "no restraint" movement of the English psychiatrists, who used a kind of work therapy, occupying the patients with gardening or farm work. This method produced very good results and helped to considerably reduce

the number of mental patients. In Germany, however, even the quite appreciable number of new psychiatric institutions founded in the 19th century were situated *outside* towns in attractive but isolated areas. It was thought that the scenery would have a beneficial influence on the patients and that at the same time they could be used for farm work. But up to the end of World War II German psychiatric hospitals were *pervaded with a barrack-room atmosphere*.

Not until the advent of modern psychopharmacology and psychoanalytical methods was it possible to introduce a more medical and individual type of therapy. It is the aim of German hospital medicine to reincorporate psychiatry as a department in general hospitals in order to make clear to the public that the mentally disturbed are sick people in the same way as are ear, eye, and surgical patients and to abolish once and for all the distrust on the part of the general public vis-a-vis the mentally sick and the psychiatric hospitals.

The numerous *foundling* hospitals all over Europe and also in Germany, particularly in the Catholic regions, can be regarded as social institutions rather than real hospitals. They did, however give rise to the foundation of special *children's clinics*. The illegitimate foundlings were normally *deposited* by their mothers in a church or on the steps of a chapel and

then taken into the custody by the authorities. Despite careful nursing, the mortality rate in these institutions was extraordinarily high because the children did not receive the mother's milk they needed and hospitalism also took its toll. It soon became apparent that considerably more success was achieved when the children enjoyed fresh air instead of being *crammed together in an enclosed space* all day. But of course there was not sufficient staff to allow for anything like individual child care.

In the 19th century the German Reformation gave rise to another movement in Germany. While sick care in the Catholic regions remained in the hands of monastic orders and nunneries the idea of hospitals and foundling homes was still alive, the dissolution of monasteries in the Protestant area in northern Germany left a certain vacuum as far as the hospital service was concerned. Although the Protestant towns made attempts to establish hospitals, there were not sufficient nurses available. The nuns who devoted their lives to their faith could not be replaced by paid nurses who, coming largely from the lowest and most primitive *classes*, left much to be desired. There were increasing complaints about alcoholism, thieving, indifference, and neglect of patients.

To remedy the situation a movement of Protestant nurses was initi-

ated in a small town called Kaiserswerth near Dusseldorf. In 1830 the Protestant person of the small parish, Theodor *Fliedner*, founded a society with the intent of helping young girls who were released from prison or who were ill. Within a short time the world-famous movement of protestant nurses developed out of this initiative. Through the Catholic concept of the motherhouse, the introduction of nurse's uniforms, and unambiguous contracts concluded with the hospital administrations containing the duties and rights of the staff, intelligent nurses trained in the name of Christ were soon working not only in Germany but all over the world wherever there were Protestant hospitals. In his efforts Theodor Fliedner was extensively supported by his wife *Friederike*. The motherhouse and the first *hospital* of this movement still exist today in Kaiserswerth and one of the most famous Protestant hospitals where these nurses worked, namely, "*Bethanien*" in Berlin, which had to be closed down a few years ago but which is still preserved as a historical monument. One of the first hospitals abroad where German Protestant nurses worked was located in *Jerusalem*.

Prior to this movement efforts had been made to inspire men and women to become qualified nurses. The physician Franz *Anton May* from Mannheim familiarized a wide public every Sunday with new medical know-

wledge; he also published a *manual on nursing*. The famous Berlin surgeon *Dieffenbach* founded a school for the training of nurses and also wrote a nursing *textbook*. These early efforts were not, however, particularly fruitful as they lacked a wide organizational basis.

Apart from the movement of the Protestant nurses, the founding of the *Red Cross* in 1863 marked an important turning point. Soon thereafter there were nurses and other personnel working for the Red Cross all over Germany. Following the signing of the 1864 Geneva Convention male and female nurses of the Red cross excelled themselves during subsequent *wars in helping* injured soldiers of both sides. There were *hospital ships* flying the flag of the Red Cross which were transporting French prisoners-of-war to Dusseldorf after the end of the Franco-German War. In more *recent wars* Red cross nurses worked in numerous Red Cross and military hospitals all over the world.

Also typical of Germany was the foundation of a professional organization of free nurses by *Agnes Karll* a free nurse herself. Free nurses, who are in the majority today, are not bound to a certain motherhouse or organization.

Although the development in the 19th century promoted the establish-

ment of denominational hospitals, there were also—as competitors, so to speak—newly established municipal hospitals' usually called general hospitals following the Austrian example because they usually admitted all patients regardless of the type of disease. In some cases, however, patients having infectious diseases were not accepted because of the risk of infection. The architecture of the hospital buildings was relatively simple and took greater account of practical requirements; it either imitated the classical style or took up neo-Gothic elements. The Spital founded in *Bamberg in 1780*, was also used as academic hospital in those times. As early as 1751 a special so-called "*accouchirhaus*" (accoucheur=obstetrician) was established in the university town of Gottingen, which is still admired today for its architecture. The *Katharinen Hospital* built in Stuttgart from 1820 to 1828—the original building no longer exists—represented the new style. It had two wings and a main entrance provided with a tympanum in the centre and is a good example of the expedient architecture of the 19th century. The *Peter-Friedrich-Ludwigs-Hospital* in Oldenburg in the Grand Duchy of Oldenburg was built from 1838 to 1851; its architecture may be considered neoclassical as it has a portico with Greek Columns. This hospital is still in use today.

In *Sigmaringen*, a small town in

southern Germany, a hospital (Furst-Karl-Landesspital) was built between 1843 and 1847, and in Bremen a *municipal hospital* was established in 1847-1850. The General Hospital in *Hamburg* (Germany's largest port), which was built between 1820 and 1823, has considerably larger dimensions than the other examples. The military hospital in *Hanover proves* that the army administrations were using the same architectural style.

Besides the municipal hospitals, the denominational hospitals were of great significance in many cities. It was certainly understandable that with the emancipation of the Jewish population in the 19th century special Jewish hospitals were founded which provided their patients with kosher food and offered treatment by Jewish physicians. The Jewish hospitals in *Berlin* and the *Israelite Hospital in Hamburg*, which was rebuilt after World War II, were particularly famous.

Large numbers of Christian hospitals were also established. For example, Catholic and Protestant hospitals were opened in Dusseldorf around 1869-1870. As the town was divided as far as denominations were concerned and the municipal administration could not come to an agreement as to which order, a Catholic or Protestant one, was to take over the

nursing tasks at the envisaged municipal hospital, it was decided to place the funds at the disposal of both religious communities so that each one could build a hospital and employ the nursing staff of its choice. The Catholics built the *Marien Hospital*, the Protestant the *Evangelical Hospital*. Both, however, agreed in their statutes to accept patients of all denominations; only the nurses and the majority of doctors were to belong to the religion in question.

These hospitals with their huge compact buildings became obsolete after the effects of the American Civil War had made it clear that the mortality rate was much lower in small *barrack-type* facilities than in large inter-connected houses with huge rooms where often 30 and more patients were accommodated and where hospitalism was widespread. The experiences gained during the Civil War in America, where blockhouses built on the spot were often used as hospitals, were put to practical use in Germany. In the Franco-German War so-called *barrack hospitals* were first built. Thanks to this new architecture, the risks of wound infections due to suppurants, tetanus or gas gangrene were considerably reduced; the barrack system was applied in the second part of the 19th century and then further developed into the *pavilion system*; the individual departments are in separate buildings located in park like surroundings and

sometimes inter connected subterranean passages. Typical examples in Berlin are the hospital near *Friedrichshain* and the *Rudolf Virchow* hospital in Dusseldorf. These hospitals were built during the time when as a consequence of the introduction of antiseptics and asepsis new conditions were created, whereby a considerable decline in hospitalism was achieved. In addition, new disciplines *with* corresponding apparatuses entered the hospitals; operating theatres were installed and new departments for ear, nose, throat, and eye diseases were created.

This development was sparked off by specialized private clinics operated by eminent scientists: one example was the eye clinic in Berlin run by *Albrecht von Graefe*, the most significant German ophthalmologist. During the last decades of the 19th century the German hospitals gradually changed completely. The large wards were replaced by well organized units which in the present-day hospitals consist of three-bed, two-bed or even one-bed rooms, and aseptic and septic operating theatres were installed. As the hospitals wished to employ the most eminent specialists, it was necessary to offer them the possibility of treating their private patients in the hospitals and of accommodating them in private rooms or private wards. This led to the class system, which was unknown in the early hospitals. Efforts are

now being undertaken to abolish the class system and to offer all patients the same optimal treatment. Formerly the first and second class patients contributed considerably towards the costs of the third class patients, and we were therefore suddenly confronted with financial problems because we had to charge day rates which were much criticized by the general public. This dilemma of increased hospital costs can be illustrated by the following facts: In 1898 a third class patient paid between DM 1.60 and DM 3.00 per day whereas today the day rate ranges between DM 180 and DM 200; formerly DM 15,000 were the estimated costs per hospital bed whereas today we have to reckon with DM 100,000 and more.

During the times of the pavilion system the hospitals were first subdivided into specialized departments. The new *hydrotherapeutical* and *mechanotherapeutical* methods led to the installation of *balneological* centres. The discovery of X-rays in 1895 led to the installation of modest X-ray rooms and later of sophisticated X-ray departments.

In 1907 the *pediatric hospital* in Dusseldorf, for example, was considered exemplary. The infants room was subdivided into individual units by means of *glass walls*. A *cowshed*, under the supervision of the hospital director, ensured that the children received high-quality milk. The chi-

ldren suffering from tuberculosis or rickets were able to take sunbaths *on the terraces*. In other hospitals special buildings were provided for the various *infectious diseases* like scarlet fever, measles, diphtheria, whooping cough, etc. so that it was possible to completely isolate the patients. Special pediatric hospitals were established on the *North Sea* to make use of *thalassotherapy*. This indicates that therapeutical considerations had been put above ideological or architectural considerations when building hospitals. Immaculate cleanliness, light and spacious rooms and a cheerful and soothing environment became the characteristics of hospital architecture at that time.

Early in this century it became clear that the pavilion system was untenable. Too long distances to be covered by the nurses, doctors and kitchen staff and some central units like the X-ray or *balneological* department were difficult to reach from the pavilions. Therefore the "compact" hospital was reintroduced. This type of hospital in the form of *high-rises* in which all medical and supply services are concentrated under one roof is now being built in all parts of the world. Unfortunately in many cases the architects have not sufficiently taken into account the psychological condition of the patients, who may be shocked when entering these "health factories," feeling lost in an anonymous mass and neglected as

individuals. In recent years the problem of the optimal size of hospitals has again been widely discussed in Germany. Experts are now of the opinion that large hospitals such as the famous "*Klinikum*" in *Berlin-Steglitz*' which is attached to the Free University, are no longer recommendable because of the negative effects on the psychological condition of the patients; from the viewpoint of administration the ideal hospital should have approximately 600 beds. Importance is again attached to colours in the hospital and to green spaces and parks around it. No consensus has been reached so far among experts on the problem of whether to locate the hospitals in the city, near the homes of the relatives of the patients, or out of town in more healthy surroundings.

As a consequence of the development described above, the hospital system is relatively differentiated today in the Federal Republic of Germany. In addition to the 1,360 public hospitals, which in most cases are run by the cities and towns (only the university hospitals are run by the respective Land; the large Psychiatric institutions are administered by special corporations under public law), there are 1,277 non-profit-

making hospitals usually supported by the churches, 997 private hospitals and 205 so-called foundation hospitals. There is thus no uniform type of hospital and no uniform method of financing and administration. On the other hand, we are certainly proud of our historical development and do not wish to destroy this tradition. The non-public hospitals also require state subsidies, and in this context a new era has been initiated by the Hospital Financing Act which became effective recently. Under this Act hospitals will receive subsidies only if they fulfil certain conditions. This is considered by the one side as a dictatorship of the state and by the other as necessary regulatory mechanism preventing certain abuses in financing and hospitalization policy. These issues are being discussed vehemently in the Federal Republic at present. It is regrettable that the opinion of the patient, the person who is most affected, is not heard. This has given rise to a popular movement demanding that present-day hospitals again place more emphasis on human relations and personal contacts between doctors, nurses technical staff, and patients. As an expert of medical history familiar with hospital development over the centuries, I am definitely in support of these efforts.

सारांश

जर्मन में अस्पताल प्रणाली का ऐतिहासिक विकास

- प्रो. डॉ. हॉन्स शाडेवाल्ड

प्राचीन सभ्यता या मध्यकाल में सही अर्थों में अस्पताल अस्तित्व में नहीं थे। क्रिश्चानिटो के आगमन से, बूढ़े तथा कमजोर लोगों की देखभाल की विचारधारा प्रारम्भ हुई। वार्डबल सम्बन्धी कहानियों ने रोगियों को शरण देनेवाली बातें निर्मित कीं। यूरोप में मठ (विहार) ही केवल चिकित्सा परम्परा के भाण्डार रह गए। मठवासियों ने चिकित्सा सम्बन्धी पौधों की खेती की तथा सेल्लारर ने योगों को तैयार किया। जर्मन के लिए विचित्र और आज भी अस्तित्व में रहने वाला प्रसिद्ध अस्पताल मोसल नदी के तट पर बर्नक्रास्टेल-कुएस में १४४७ में कूसा के निकोलास द्वारा स्थापित किया गया। धर्मयुद्ध से यूरोप को लौटते हुए शूरवीरों ने अस्पताल प्रणाली को प्रारम्भ किया। १२५४ में गोसलर में स्थापित किये गये अस्पताल का निर्माण अर्धरूप से लकड़ियों से किया गया है जो कि दक्षिण जर्मन में सामान्यतः पाया जाता है जब कि वह उत्तर जर्मन के ईट से निर्मित प्रथा के विरोध में है। धर्मनिर्पेक्षतावाद प्रचार के समय अनेक मठ बैरक मानसिक आश्रमों में बदल गये। १६ वीं तथा १७ वीं शताब्दी का सबसे बड़ा अस्पताल वुर्जबर्ग का जूलियस स्पाईटल है, जिसका कि युद्ध के बाद पुनर्निर्माण किया गया और वह अभी तक है।

ज्ञानोदय के साथ साथ सेना के चिकित्सकों तथा चिकित्सा विद्यार्थियों के शिक्षण के लिए अस्पतालों का निर्माण किया गया। संक्रामक रोगों के लिए विशेषकर लाजारेट्टोस-प्लेग नामक द्वीप पर विशेष अस्पताल थे, वहाँ पर मकान बनाये गये तथा कुष्ठरोग समितियाँ गठित की गईं। जेलों में कैदियों के साथ मनसिक रोगियों को रखा जाता था, लेकिन बाद में उनके साथ रोगियों के समान व्यवहार किया जाने लगा। असंरव्य परित्यक्त शिशु अस्पताल चिकित्सा संस्थान की अपेक्षा सामाजिक संस्थान थे। १९वीं शताब्दी में जर्मन मठों के विघटन के बाद जहाँ तक चिकित्सा सेवा का सम्बन्ध है एक निश्चित रिक्त स्थान का निर्माण हुआ। १८३० में थियोडर फ्लाईडनर ने जेठ से छोटी गई युवतियों या रोगियों की सहायता के लिए एक संस्था की स्थापना की और यह संस्था अल्प समय में प्रोटेस्टेण्ट नर्सों का विश्व प्रसिद्ध आन्दोलन बनी। साम्प्रदायिक अस्पतालों के साथ साथ १९वीं शताब्दी में नगर निगम अस्पतालों की भी स्थापना की गई। अन्त में १९वीं तथा २०वीं शताब्दी में अस्पतालों के विकास के बारे में संक्षिप्त विवरण दिया गया है।