

1. HEALTH AND SOCIAL CHANGE – A COMPARISON IN TIME AND SPACE

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Every time and historical space means unique conditions for the welfare and health of human beings as an effect of epidemiological, economic, social, cultural, political and institutional factors. At the same time, history, social sciences and medicine has expanded the knowledge how these factors correlate to each other. This lecture discusses how social change in history and present-day societies affect welfare and health with examples from nineteenth-century Sweden and Russia and South Africa during the last decades: three seemingly incomparable contexts. And yet, these examples show how profound social change tends to lead to many common results.

Every change creates winners and losers. Socially, the losers are always those who have had the worst odds from the very beginning, those who have the least resources to realise a good life. The impact on different ages depends on the epidemiological conditions of the time and space. Although middle-aged men are usually economically better off, male health problems and mortality tend to react more negatively than amongst females of the same generation. The reason for this pattern is not primarily biological but rather to find in "gender" – socially and culturally shaped male and female roles and identities.

Modern public health science often uses "social capital" and "empowerment" as positive means towards healthy societies. In nineteenth-century Western Europe, formal and informal institutions – the State, local communities and popular movements – were important actors. Social and health crises during the beginning of the century were followed by a safer and more healthy world, where mortality decreased and life expectancy increased in both sexes, all ages and social strata. The lack of stable institutions, particularly on the local level, is still a basic problem in today's Russia and South Africa. Democracy did not immediately provide more welfare and health for all. The social gap has, on the contrary, increased and major health problems are weakening the productive power of the societies. Historical lessons underline the need for new political and institutional solutions in order to turn the tide.

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2. THE FIRST ICELANDIC MEDICAL WOMEN IN USA AND CANADA

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The education and carrier of the first three medical women of Icelandic origin that studied and worked abroad will be discussed.

3. GERTRUD GUSSANDER – A PIONEER FEMALE SURGEON IN SWEDEN

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Not until 1870 were women allowed to pass the matriculation examination necessary for gaining entrance to Swedish universities. The first female student at Lund University was registered in 1880, she studied medicine and was admitted the year after Karolina Widerström, the first medical student at the Karolinska institute in Stockholm. Widerström became the first female doctor in Sweden. Both these pioneers worked in private practice, mainly gynaecological.

Gertrud Gussander came about 20 years later. She was born in 1872. Like Widerström she became a certificated teacher in gymnastics before she was admitted to medical studies. These she started in Lund, soon to continue at the Karolinska institute where she received her license to practice medicine in 1906. Already before that she had worked as deputy assistant surgeon in Kristianstad, a country hospital in southern Sweden, not far from the University of Lund. The medical staff for the whole hospital consisted of the chief surgeon and the assistant surgeon. After further surgical practice and study travels on to Copenhagen, Vienna and Berlin in 1908 and München, Halle and Dresden in 1910 she continued her surgical training in Kristianstad. She could not be appointed as deputy for the chief surgeon because the Royal Medical Board did not allow women on such senior posts. Therefore a male practising doctor in the town received a „sham“ appointment, while dr Gussander did the real clinical work. Not until 1925 could a woman be appointed as chief physician or surgeon in a hospital.

At the age of 40 she defended her doctoral thesis (M.D., Ph.D.) at the Medical faculty in Lund. The title was “On Gastropstosis and its Operative Treatment”.

The material consisted of 3155 patients treated at the hospital in Kristianstad. The diagnosis and material reflected the interests of the Chief surgeon of the hospital.

The faculty's referee made a careful job. He was impressed by the large material and voted for acceptance of the thesis. However, heavy criticism was raised; it centered around the rather immature discussion of previous studies in the field and the uncertainties in the diagnosis. In retrospect one can conclude that the criticism was fair, to a large extent connected with the fact that dr Gussander had not worked in an academic atmosphere. Her mentor in Kristianstad had no scientific training.

At that time, in 1912, Gertrud Gussander was the third woman in Sweden to defend a doctoral thesis. The previous doctorates had been in pathology and ophthalmiatrics. Several decades were to pass before another woman wrote a surgical thesis.

While working with her thesis dr Gussander bought a piece of land in the county of Dalarna in the middle of Sweden. It was beautifully situated at the confluence of two large rivers and formed the ground plot for a private hospital. This venture met with difficulties, the building burnt down just when it was finished and dr Gussander had to start again from scratch. The first patient was admitted in 1912. Thereafter the hospital and its 25 beds was used for a variety of patients and a large number of ambulant cases. Most of the hospital patients underwent rehabilitation but also patients with various acute diseases were cared for. The surgical diagnoses varied from i.a. appendicitis, amputation and hernia to cholecystitis and ileus.

During these years as the only doctor in a small country hospital Dr Gussander kept up her medical training. She thus made a long journey to the United States in 1923, visiting in New York, Chicago, Rochester and Baltimore. Her interest was not only abdominal and gynaecological surgery but also the building and organisation of hospitals as well as the social conditions for nurses.

She was unmarried. Her inheritance went to two foundations, one to handicapped children and one to support female doctors.

4. MEDICAL STUDIES IN ATHENS UNIVERSITY FOR THE FIRST YOUNG WOMEN IN 19TH CENTURY

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INTRODUCTION AND OBJECTIVES: To present the persistent and systematic efforts of the first two young women, the Panayotatou sisters, to enter in Athens University and attend the lectures of the Medical School in spite of the opposition of their male colleagues expressed in many ways and mainly with hostile and impolite behaviour in the classes.

MATERIAL AND METHODS: The Archives of Athens University, the newspapers and the magazines of the last decade of the 19th century were studied, as well as the biographies, memories, narrations of the medical students and the literature of that period.

RESULTS: Women had always been regarded as healers, especially midwives throughout History but they were kept out of theoretical knowledge and official professional acceptance. It was only at the second half of the 19th and during the 20th century that female individuals were accepted as medical students and achieved to graduate, but not without struggles. The first Greek University including four Schools (Law, Theology, Philosophy and Medicine), was established in 1837, only seven years after the National Independence and three years after the nomination of Athens as the capital of the New Nation. Almost 50 years were necessary for the faculty, to liberalize its attitude and stop resisting to the entrance of women at the University. Angeliki Panayotatou was the first who made a serious attempt and succeeded to gain admission for medical studies for herself and her younger sister Alexandra. The other students had not withdrawn their objections and manifested their negative verdict with aggressive actions but the two sisters during the course of their schooling conducted themselves with dignity and courtesy and finally passed the qualifying examination with the highest average.

CONCLUSIONS: The first women in Athens Medical School provided a personal model to generations of women to seek education and the means of a complete life destination, transforming the rules in science and learning, an exclusive male privilege until then.

Keywords: *Female students, Medical studies, University of Athens*

5. PROFESSIONAL WOMEN IN PSYCHIATRY

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The aim of this paper is to describe the short history of women in psychiatry, from the last decades of the 19th century – 1960. Psychiatrists, psychologists and nurses were allowed entry into psychiatric hospitals, overcoming a resistance, which was most pronounced among doctors, less so among psychologists who came later into the profession and absent among nurses, whose presence underlined psychiatric treatment as a medical speciality, nurses caring the patients and keeping a subordinate position in relation to the doctors.

Women were allowed entry into medical education in U.S.A. from 1845, in Denmark 1885. Two items are obvious in the resistance: the contradiction of being a woman and a doctor – here sexuality was an obstacle. It was unnatural, they were considered having peculiar reasons, or they were mannish maidens, sexless. No such obstacles appeared for male medical students. A second obstacle was fear of a future, where men could be subordinated by women.

The more courageous women challenged the theory that higher education would jeopardise women's reproductive capacity and threaten the future of the species. They used their knowledge as women and as psychologists/psychiatrists to press for equal educational and professional opportunities for women.

What characterised their fields of interests? It was usual among the early generations of female psychiatrists that they stressed the lives of women and children, the social factors responsible for psychiatric diseases and challenged the biological theories of ovarian influence on mental illness and subsequent gynaecological operations in order to take away the evil.

Female psychologists and psychiatrists around Freud were more welcoming, Freud being aware of his own difficulties in enlightening the "Dark Continent" which female sexual development and identity creation constituted. Melanie Klein, Karen Horney, Joan Reviere, Sabine Spielrein and several others contributed with analysis about envy, jealousy and masochism and developed considerable contributions to psychoanalysis in its early years.

Psychologists, as well as psychiatrist were active in establishing the field of child and adolescent psychiatry.

Female psychiatrists' influence in the profession nowadays is mostly centred around less prestigious items such as social subjects, community psychiatry, psychotherapy and child psychiatry – considered less academic subjects than biological psychiatry.

An effort to look at the patient in a more holistic way, considering her social and psychological conditions is an item attracting mostly female professionals.

Since the early days of women in the medical profession, female psychiatrists and psychologists have established themselves as part of the profession, but they have not succeeded especially in Europe, in making gender issues a mainstream item. The official textbook of psychiatry in Denmark does not have the catchword gender differences. Analysis and discussion about the meaning of gender is nearly absent in Danish psychiatry.

Keywords: Female professionals in psychiatry, gender research, prestige of psychiatric illness.

6. EDUCATION AND WORK OF ICELANDIC MIDWIFES IN 18th CENTURY

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The early law on education and the work of midwives, and the only one until the year 1760, was set by the church in the year 1685. As a result of this earliest legislation, a "ritual directory" was printed, a handbook for priest, to be used as a guide in the education of midwives and their appointment to the role. The education on the behalf of the church was only based on religion, the midwives were taught that everything was in Gods hands and that they should pray for help. There was no instruction in anatomy or biology. The first textbook in midwifery that was translated into Icelandic, was printed in 1749. It is not know how many books were printed nor how many midwives had it.

In a new legislation from 1776 in was approved on spending 100 rd. yearly on midwives issues. It seems that the Icelandic authorities soon realized that the 100 rd. would not go very far and a dispute began on how the money should be spent. Bjarni Pálsson, who at that time was the physician of Iceland, the Icelandic legislative authorities and the Church, all wanted to start an official school in midwifery, but disagreed on the who should run the school. Hannes Finnsson the bishop in Skálholt and Bjarni Pálsson never agreed on what to do or what was the best solution for the Icelandic society and after years of quarrels they came to the conclusion that the money should be used to pay one midwife in each county a small amount every year for her services.

In the years of Bjarni Pálsson's service as the physician of Iceland, he established an examination in midwifery, which twenty four women and one man passed in 18 years. The year 1761 saw the biggest numbers, when 5 women passed the exam, in 1768 and 1773, four women passed the exam, but in other years fewer passed and some year no one did.

Keywords: Midwives, history, education religion

7. EPIDEMICS IN ICELAND – AN ISOLATED NORTHERN COMMUNITY

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Historical information of epidemics in Iceland from the 13th Century and onwards can be found in the Annals 1400-1800 – “Annales Islandici, Posteriorum Sæculorum” and in the Icelandic Health Records from the Directorate of Health -“Heilbrigðisskýrslur”. A nation wide census made in 1703 and the bills of mortality add to our knowledge on the behaviour of smallpox in an isolated community. The information on the so-called plague in the 15th century is incomplete but gives some important description of events. The evolution of epidemics changes as Iceland approaches modern times with increasing population size and communications with the overseas world.

Historians have more or less overlooked the effect of the epidemics on the Icelandic people and its development.

8. MEASLES EPIDEMICS IN ICELAND AND THE FAROE ISLANDS DURING THE 19TH CENTURY

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Mortality rates in areas situated at periphery of the European continent were prone to considerable fluctuations during the 19th century. Many lethal diseases that had already transformed into childhood diseases in other European societies affected all age groups and had wide-ranging consequences for the infrastructure of relatively poor societies.

This paper examines the case of measles in two island-societies in the North Atlantic, Iceland and the Faroe Islands. It focuses mainly on the measles epidemic in 1846. This epidemic was widely analyzed by the well known physician Peter Panum who resided in the Faroe Islands in 1846. Panum and his colleague A.H. Manicus showed that the measles epidemic affected the entire population of the Faroese islands with the exception of the very old (those born prior to the preceding epidemic in 1781). Similar observations on measles in Iceland were made by the physician Peter Schleisner who was in Iceland in 1846. However, Schleisner did not make a study on measles comparable to the one of Panum and Manicus. In this paper church registers and medical records are used to assess the age-specific case-fatality rates from measles in Iceland in 1846. Another objective is to shed light on the implications of mortality crises in sparsely populated isolated societies where the care of the sick was entirely the responsibility of family, kin and neighbours.

9. MEASLES IN THE NORTH ATLANTIC AREA IN 1935

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Measles has for centuries been recognized as a threat to isolated communities in the northern part of the Atlantic. As early as 1787 the colonial, including the medical administration, in Copenhagen imposed regulations concerning travel to Iceland to prevent the introduction of small-pox and measles. In 1803 these regulations were extended to cover travel to the Faroe Islands and Greenland. Despite these benevolent intentions measles appeared both in Iceland and the Faroe Islands. The most famous outbreak was the one on the Faroe Islands, described by Panum in 1847. However, measles did not appear in Greenland.

Late in 1934 a measles epidemic started in Denmark and 89,000 cases were notified in 1935 contrasting to 7,000 and 9,000 cases the two previous years. At least in three instances measles were brought to the communities in the north Atlantic. In December 1934 an infected stoker on the liner 'Tjaldur' serving the route Copenhagen and the Faroe Islands brought the disease to one of the islands (Vaagø). This caused a limited outbreak lasting to April 1935 with 81 notified cases. In April 1935 the first ship, after the winter, left for Greenland from Copenhagen. During the voyage a young Greenlander who has stayed in Denmark during the winter developed measles. The captain received instructions to head for Reykjavik. Here the patient and all other on board who were suspected of not having had the disease were put ashore. The ship then left for Greenland and no further cases appeared on the ship or in Greenland.

Early June a small girl with measles arrived in the Faroe Islands with 'Tjaldur' from Copenhagen. A number of passengers who have not had measles were admitted to the epidemic hospital and all developed measles. Almost at the same time measles were introduced from the Shetland Islands. From June 1935 to April 1936 the number of cases reached 4,456, corresponding to almost 20 per cent of the population.

Two major developments have created threats to the most vulnerable population in the north Atlantic, the population in Greenland. The first was related to the fact that travel time between Copenhagen and any destination in Greenland since World War I had come below the incubation time of measles: 13 days. The second was related to the fact that the Danish government in the late 1920s reluctantly has accepted that fishing in Greenlandic waters could be open to citizens of the Danish realm under certain specified conditions.

When measles struck the Faroe Islands in June 1935, some 100 vessels with approximately 2,000 fishermen were about to leave the Faroe Islands for fishing off the Greenlandic west coast from designated fishing ports. Measles appeared in some cases en route to Greenland or after arrival. The medical authorities in Greenland reacted by imposing quarantine measures strictly forbidding contacts between the Faroese fishermen and the Greenlandic population. The measures appeared successful by preventing spread of the infection in the Inuit population.

The episode caused highly needed improvements of the miserable health facilities at the most important of the designated fishing ports for Faroese vessels.

The quarantine and isolation measures prevented spread to the Greenlandic population in 1945 and 1947 when Danish children after arrival to Greenland developed measles: However, in 1951 major epidemic developed in the south of Greenland inflicting virtually 100 per cent of the population and with an almost 2 per cent fatality rate.

The paper is based on publications and on unpublished material from public archives in Copenhagen, Nuuk and Thorshavn as well as a private archive.

Keywords: Measles, Epidemic control, Faroe Islands, Greenland

10. MALARIA EPIDEMIC IN FINLAND IN 1858–1862

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Finland was the northernmost country to suffer from recurrent malaria epidemics in the 18th and 19th century. Contemporaries considered malaria a common disease causing disability, but quite a rare cause of death. Malaria in Finland was probably caused by *Plasmodium vivax*. Already during the 19th century it was noticed that the prevalence of malaria varied greatly in the course of years. Most of the cases of malaria were noticed in spring and in autumn, especially after a hot summer. The islands of Ahvenanmaa (Åland islands) in south-western Finland were the most severely affected area during the 18th and 19th century. There are two possible explanations for the existence of malaria in Finland: 1) it was repeatedly imported or 2) it was an endemic disease. Intermittent fever (like malaria) had many names in Swedish and the usual names in Finnish were *wilutaui* and *horkka* in the 18th and 19th century.

There was a malaria epidemic in Finland during the Crimean War in 1853–56 (during which the British and French navy ravaged and blockaded the Finnish coast in 1854–55), but there was more or less a lull in the year 1857. The most wide-spread malaria epidemic occurred in Finland in 1858–62. The aim of this study is to investigate this last 19th century malaria epidemic in Finland. The material for the study consists of the annual reports of the provincial medical officers.

The epidemic started from the south-western Finland in 1858. During the following years malaria spread out towards north-east, and reached its maximum spread in 1862. Mortality was quite small, and quinine was widely prescribed by the provincial medical officers to halt the disease. One of the factors responsible for the exceptional wideness of the epidemic might have been the warmth of the climate in the late 1850s and early 1860s. The factor causing the end of the epidemic seems evident: the cold and rainy summer in the year 1862 ended the epidemic all at once.

The question – How could malaria survive in Finland for years? – have caused a lot of speculation. The harsh climate in Finland seems to be in conflict with the environmental requirements of malaria parasites. *Plasmodium vivax* can hibernate in humans, which explains part of the problem, but how the malaria parasite could complete its life cycle in mosquitoes remains a mystery. It has been suggested that those *Anopheles* mosquitoes which transmitted the parasites in Finland stayed mainly indoors, and the harsh environmental conditions were for less importance. However, the abrupt end of the 1858–62 epidemic after an exceptionally cold summer in 1862 persuades to conclude that the environmental temperature had a definitive role to play also in Finland.

Keywords: Finland, malaria, provincial medical officers, 19th century, temperature

11. DIPHThERIA IN FIN DE SIÈCLE AUSTRIA

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In the course of the 19th century diphtheria became the most dangerous disease of children and was responsible for about one tenth of deaths among children. The situation changed after 1894 when Emil Behring invented passive immunization which reduced mortality to about one sixth of former values. The paper examines determining factors for diphtheria mortality in the western part of Austria-Hungary.

The following hypotheses are tested:

1. Passive immunization did not produce an immediate drop in mortality figures but a decrease of diphtheria mortality within several years.
2. Higher population density caused higher rates of diphtheria mortality due to easier transmission of infectious diseases in densely populated areas. This is true for the years before 1894 as well as for those after 1894.
3. Urban regions had an advantage compared to rural areas due to their higher numbers of physicians. An effective treatment of diphtheria (tracheotomy, passive immunization) demanded a physician both before and after 1894.
4. Thinly populated and spacious rural areas suffered a specific disadvantage due to delayed treatment.
5. Diphtheria mortality was higher in areas where overall infant mortality was high because other causes of infant mortality like infectious diseases were due to similar forms of transmission and similar other risks.
6. Apart from other factors mentioned before, certain regions suffered specific risks due to their economic backwardness and their environmental situation.

The area under consideration includes the whole of today's Republic of Austria, the Czech Republic, Slovenia, part of Croatia (Dalmatia), parts of Poland and Ukraine (Galicia, Bukowina) and part of Italy (Trentino-Alto Adige, Trieste). The analysis is conducted on the level of districts and for the period 1880–1912, i. e. the years before the invention of passive immunization and the first two decades after its introduction. It is based on a pooled data set containing data for all of the 350–400 districts with their data from every single year. The data are employed in multivariate models, using diphtheria mortality as the dependent variable and infant mortality in general, urbanization indicators, population density and regional factors as independent variables.

The results suggest that Behring's invention lowered diphtheria mortality but was not the only relevant factor. In rural areas higher population density led to higher diphtheria mortality, in urban areas diphtheria mortality was lower than in rural areas. Diphtheria mortality showed no systematic connection with general infant mortality. Apart from other factors, certain crown-lands of the Austro-Hungarian Monarchy like Galicia had a clear disadvantage concerning diphtheria cases.

Keywords: *Diphtheria, Austria-Hungary, passive immunization, Behring, regional history*

12. POLIO VACCINE - 50 YEARS

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April 12, 2005 marked the 50th anniversary of the press conference at the University of Michigan in Ann Arbor, where Dr. Thomas Francis Jr., director of the university's Poliomyelitis Vaccine Evaluation Center, announced to the world that the polio vaccine developed by Jonas Salk at the University of Pittsburgh worked, that it was "safe, effective, and potent." Salk became an instant hero around the world, since the results of the trial of his vaccine on 1.8 million schoolchildren in 1954 demonstrated rates of protection of approximately 80 percent with three doses of vaccine. Soon government licenses were issued to six pharmaceutical companies in the U.S. to manufacture the vaccine and mass immunization campaigns began. About 450 million doses were administered by injection over the next four years. The number of polio cases in the U.S., which had reached 50,000 annually in the early 1950s, began to drop precipitously. In 1956, the year after the Salk vaccine was approved and began being used, the number of cases dropped to about 15,000 and the year after that to about 5,500.

The injected vaccine developed by Salk using inactivated (killed) polio virus was not the only tool in the fight against polio. An oral vaccine, using an attenuated (live) polio virus, which was developed by Albert Sabin at the University of Cincinnati and licensed for manufacture in 1961-62, had important advantages over the Salk vaccine, particularly in rural areas and developing countries, and soon became the vaccine of choice. But the widespread acceptance and success of the Salk vaccine in the United States made it difficult for Sabin to conduct large trials of his vaccine in his own country and so he looked to the rest of the world to perfect and test his vaccine, especially to the Soviet Union. By doing this he became an important actor in a Cold War drama of medical diplomacy.

Poliovirus was a common enemy for the United States and the Soviet Union. Sporadic cases and small outbreaks of polio were already registered in Latvia, Estonia, and St. Petersburg in the latter part of the 19th century. Small epidemics continued there and in other areas throughout the first half of the 20th century. But it was only after World War II that large epidemics suddenly started to appear in almost all of the republics of the former Soviet Union, particularly the Baltic Republics. Polio started to create burgeoning public health problems and thus provided a political opportunity for the Soviets to establish contacts with the U.S. with the hope of exchanging scientific medical information and personnel that would be beneficial to both countries.

In this paper I would like to take a closer look at the field trials of the Sabin vaccine in the northern European countries of Estonia, Latvia, and Lithuania. I will do this primarily through the eyes of Yale University's distinguished polio researcher Dorothy Horstmann, who was sent with a group from the World Health Organization (WHO) to review the results of millions of immunizations with live attenuated oral poliovirus in the Soviet Union and Eastern Europe. Many of the illustrations will be from a new exhibit "Whatever Happened to Polio?" which opened at the Smithsonian Institution's National Museum of American History on April 12, 2005.

13. THE LAST CASE OF SMALLPOX IN DENMARK - THE ORGANIZING CONDITIONS IN 1970

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Smallpox contributed to many deaths in Denmark up to the introduction of the vaccination in the beginning of the 19th. Century. The last minor smallpox epidemic in Denmark was in 1924, and subsequently no doctors had special experience in smallpox. In September 1970 a Norwegian medical student died from smallpox in Copenhagen after returning from a journey to Afghanistan, where he has been hospitalized for enteritis. During the 5 days in Copenhagen before hospitalization he had had extensive contacts with many people. He was hospitalized at Blegdamshospital and was isolated, and the diagnosis of smallpox was verified on day 5. He was then totally isolated in a pavilion with 2 nurses and one doctor. The initial diarrhoea (*Salmonella typhimurium*), and later septicaemia with salmonella, the copious expectoration up to 1½ l pr day (*Streptococcus pneumoniae*, *Klebsiella pneumoniae*, *E. coli*, β-streptococci), the enormous exudation from the desquamated skin caused large problems concerning water, electrolytes and protein balance, requiring an input up to 13 l per day. It was necessary to perform tracheotomy and artificial ventilation. He was treated as a patient with extensive burns with metal sheets and when his body temperature fell to 30° C with electrical heat. He died after 25 days of smallpox corresponding to a pathological picture of toxic epidermal necrolysis (TEN).

The containment was successful in cooperation with the Danish National Board on Health, the Medical Officer of Health from Copenhagen and the county (where the patient lived), police, State Serum Institute, and Ministries of the Interior and Foreign Affairs. Vaccination of the exposed persons and the hospital staff, isolation in small groups (maximum 20 persons) of 589 primary contacts in the hospital pavilion-wards and 12 military tents were performed.

No secondary cases occurred. The outbreak of smallpox in Copenhagen ended, and the city was not declared "local infected area", and we avoided a panic mass vaccination of large group of people. The article describes these activities, which are effectuated within a few days and headed by a capable and unanimous leadership, in a serious and complicated situation and with an engaged cooperation from the whole staff.

14. EPIDEMIOLOGY OF THE PLAGUE IN A REGIONAL AND LOCAL SETTING IN SOUTHERN SWEDEN 1710–1713

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In local folklore in southern Sweden a boy with a rake and a girl with a broom, strangers to the local community, represented the plague. Where she used the broom everybody died. Where he used the rake some people survived. The rake and the broom in a metaphorical way say something characteristic about the plague. In places where it got a hold it could kill up to two thirds or three fourths of the population. At the same time villages only some kilometres away were totally spared without a single plague death.

I have studied the plague's last visit to Sweden in the early 18th century. Focus is on Scania, the most southern part of Sweden. Here the plague arrived in the late autumn of 1710. The duration of the epidemic was three years, and during these years it constantly moved between different parts of the region. Plague mortality was at its highest level among young people between five and twenty years of age. Death arrived very rapidly, usually within only two or three days of sickness. This is in contrast to smallpox and petechial fever, where duration of the sickness usually was between one and three weeks.

In all the different local studies there is a common pattern. Usually plague begins with one death. Sometimes it is documented that this person has just arrived from a place at some distance, from abroad, or from an infected village in the vicinity. Then nothing happens among the rest of the inhabitants in the house until two weeks or more have passed. Then one after the other falls ill and dies in a very short period of time. People who visit this house run great risk of falling ill themselves and dying after only a few days of illness. Incubation period between infection and falling ill is short, perhaps only two or three days. Mortality in a stricken house is high.

The seasonality also has a constant pattern with many deaths in summer and in autumn, and with a minimum in late winter. My observations indicate that it is enough for the plague to survive in *one* parish. When spring comes with warmer weather it spreads from there to formerly not affected houses and villages in the vicinity. This pattern fits well with the traditional model of plague spread by the black rat and its fleas, where the initial interval is the period when plague is rampant among the rats. During this period there is no risk entering the house, a situation that rapidly changes once all the rats are dead and the fleas are looking for other beings to attack. And entering the house was exactly what people did, the relatives living in other villages who followed the cultural demands of society to give help and assistance to the sick person and after his/her death to the mourning family.

Plague is a disease with a very complicated ecology. Climate, temperature, humidity, the local fauna of mammals and fleas, the genetic karyotype as well as the immunological status of the rodents, their behaviour when dying of the plague as well as their relation to the human habitations – all these factors may vary between different regions and in one way or other influence the course of the epidemic among the human population. Because of this complexity comparisons with the situation in other parts of the world ought to be carried out with caution.

Keywords: *Plague, epidemiology, local context, southern Sweden*

15. THE PLAGUE REAPED THEM YOUNG

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In August 1710 the plague struck Sweden for the last time. In the beginning of November this year the disease reached the port town Karlskrona, province of Blekinge. Despite strict quarantine regulations for foreign ships calling Swedish ports, the disease was spread rapidly into the town and the Naval base, and subsequently, to the inner parts of the province including the village of Holje (present day Olofström). There are no written sources describing the ravage of plague in this village, since the church books were later destroyed in a fire. Thus, the mortality rate in Holje village is unknown. As the fear of the disease was deeply rooted, plague victims were not buried in ordinary cemeteries. The victims from Holje were buried in a plague cemetery outside the village, later to be known in the folklore as "Pestbacken". In 2001 a building project affected a part of Holje plague cemetery and 90 graves containing 117 individuals were excavated and examined. The results so far indicate that the majority of the buried individuals were younger than 30 years of age. Thus, the majority of the plague victims were young people, a generation in the midst of life that just had or were going to establish families. Several of the juveniles had already been severely hit by famine during the hard years 1690-1700. Why was so many young people affected? What were the consequences for the society when so many young people died in such a short time?

Keywords: Plague, 1710, Skeletons, Blekinge, Sweden, Age structure

16. GENERAL PRACTITIONERS IN THE FAROE ISLANDS IN THE 19TH CENTURY

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Early in the 19th century the Faroe Islands were integrated into the Danish public health administration, and instructions governing Danish medical practitioners also applied to the (at that time) only doctor in the Faroes. In the last decades of that century the number of medical practitioners was increased to five, one being the chief medical officer. They were combining their income from state salary, sale of medicine and practice, including poor practice.

The focus of this paper will be to use the Faroe Islands as a case to demonstrate how the medical profession consolidated its social position and medical authority in the course of the 19th century. Partly by comparing status and working conditions of medical practitioners with those of the other civil servants in the Faroes, and partly by examining their role as modernizing agents, especially in introducing medical knowledge in the community to match the growing standards of public health of the time, and by teaching people to conduct a healthy way of living.

With two exceptions the medical practitioners in office in that period were Danish men at the beginning of their career. The driving forces of seeking employment in the Faroes may have been prospects of quick money-making and/or a better career on their return to Denmark after some years in service in the Faroes. This consideration was a motive for doing a good job. They did so by trying to influence relevant authorities to introduce medical reforms and by making recommendations on solving social and medical problems, which they encountered in their daily work. As the working burden was varying, some of them used their spare time to perform medical research on the basis of observations in their practice, and had the results published in medical journals.

Around 1900 there was a widespread public demand for the provision of more doctors. This might be interpreted as a successful outcome of the medical profession's insisting on their superiority to lay healers. But it was also a time with more frequent occurrences of infectious diseases, and finally this demand reflected occupational changes taking place in the transition from peasant to fishing society. The time- and manpower consuming task of bringing doctor and patients into contact by rowing boats became a bigger problem in a society, where most men were away on fishing in distant waters and the home-being men were dependent on earning money as labourers.

Keywords: General practitioners; Faroe Islands; 19th century

**17. A DANISH PROVINCIAL PHYSICIAN AND HIS PATIENTS AROUND 1800.
THE PATIENT RECORDS FROM THE PRACTICE OF CHRISTOPHER DETLEV
HAHN**

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The archives of the Medical Museion in Copenhagen contain 27 volumes with 2334 patient records written in Latin in a neat handwriting. This collection of records from the practice of Christopher Detlev Hahn (1744-1822), which have not previously been studied, provides a unique insight in general practice at that time.

Hahn, the son of an army surgeon, attended school in Haderslev in North Slesvig and graduated in medicine in 1766 in Halle (Germany). He set up as a medical practitioner in Århus, where he became Stiftphysicus (i.e. diocese physician) of Århus Stift. The records show that Hahn to a large extent served the upper strata of society, treating not only all the members of these families, but also their servants. However, he also treated shopkeepers, craftsmen, and farmers, as well as a few poor members of society whom, as a medical officer, he was obliged to treat without payment.

Hahn's records resemble hospital records. At the beginning of each record Hahn entered the diagnosis, name, title/occupation, age (not always recorded), past history, symptoms of present illness and a few physical findings. Then followed an entry for each visit. The diagnoses were much more varied than those used today. They often consisted of two parts, the first being generic and the second specific, e.g. *cardialgia cum cephalalgia et vomitu*, and *febris continua cum reumatismo dextri pectoris et scapulae*, where *cardialgia* and *febris* represent the generic component, while the rest, in many cases preceded by the word *cum*, represents the specific component, stating the characteristics of that particular patient.

The median treatment period (i.e. number of days between first and last visit to the patient) was 22.8 days (range 0 to 309 days). The median number of visits to each patient was 12.3 (range: 1 and 83). About one third of the patients were children.

The description of the patient's disease is usually quite brief, but Hahn often recorded what he regarded as causal factors, e.g. climatic changes, mental states (anger or depression), lifestyle and retention of waste products (constipation or cessation of menstruation). The physical examination focused on the quality of the pulse (e.g. *celer* or *tardus*, *durus* or *mollis*). The finding of a hard pulse (*pulsus durus*) was a danger signal, which immediately elicited venesection.

Patients with fevers were usually treated with emetics and various laxatives in order to evacuate waste products, but Hahn also used a wide range of other remedies. He was an eclectic therapist in the sense that he used traditional, Galenic drugs (e.g. wormwood), imported herbal drugs (e.g. *ipecacuanha*) as well as mineral preparations (e.g. *calomel*) first introduced by Paracelsus and the iatrochemists. We studied all the prescriptions in 27 records, and in these alone Hahn used 40 different herbal drugs and 12 other preparations. We studied the alleged effects of these remedies by means of an old textbook of pharmacology. Hahn also used Spanish Fly and mustard plasters to divert the disease process and in some cases he applied *fontanellae*. Hahn's view of the causation of disease and his choice of treatments clearly shows that he belonged to the Hippocratic tradition. We shall in our presentation present a few patients in greater detail, including cases of variolation and vaccination.

The more than 2000 records were ordered alphabetically from Volume I to Volume XXVII, according to diagnosis, which proves that Hahn had them bound at the end of his career. We presume that he regarded them as his life work which he felt deserved to be studied by future generations of doctors. As we shall explain in our presentation, we believe that this unique collection of records carries a message also to members of the medical profession today.

Keywords: Patient records, general practice, 1800, Hippocratic medicine, diagnosis, treatment

**18. RE-OPENING A CLOSED FILE OF THE HISTORY OF PSYCHIATRY.
PSYCHIATRIC FAMILY CARE IN FRANCE, GEMANY AND BELGIUM,
CA. 1850-1914**

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During the second half of the nineteenth century hardly any other issue has been discussed as controversially and aggressively as the question of the asylum. In these debates over more than half a century, a central topic which had been discussed again and again, was the placing of mad people, psychiatric patients, into ordinary families. In both Germany and France a little Belgian town served as the model of the so-called family care. Gheel, the Flemish colony of the mad, existed because of a pilgrimage dating back to the medieval ages. It had attracted patients with all kinds of diseases considered to be connected to madness since as far back as the twelfth century. As a consequence of the French Revolution and its influence on the provinces of the future state of Belgium this pilgrimage and its institutionalized hosting of mad visitors in local families became secularized, but went on being practised. In my presentation to the Reykjavik confrence in this summer I will describe the DEBATES and the established INSTITUTIONS of psychiatric family care between ca. 1850 and the first World War in both France and Germany. These forms of care will be analyzed in respect to parallel phenomena as well as in respect to differences, in both discourse and practice.

19. THE FIRST SURGEON GENERAL: THE ICELANDIC PUBLIC HEALTH SYSTEM IN 1760-1833

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The paper discusses the appointment of the first Surgeon General in Iceland and the position of health affairs in Iceland from 1760 to 1833. Since the Middle Ages, a social system had developed within the Church for the support of the sick and the poor. The general public also had access to practitioners of folk medicine and could consult either charlatans or learned individuals who had some knowledge of medicine following studies in Copenhagen. It was not until the second half of the eighteenth century that any significant changes took place in the field of health care, with hospitals built in Copenhagen shortly after the mid-century. In Iceland no medical service was available before 1760, the situation being in many respects similar to that of the Scandinavian countries and elsewhere in Europe.

The year 1760 represented a watershed in Icelandic health services when Bjarni Pálsson (1719-1779) was appointed the country's first Surgeon General. In 1748, Bjarni Pálsson graduated with the degree of *Philosophiæ Baccalaureus*. He made the acquaintance of a number of prominent scientists in the course of his studies in Denmark. Bjarni Pálsson was entrusted with the task of supervising medical instruction, the education of midwives, serving as administrator of a dispensary, establishing an infirmary at Nesstofa near Reykjavik and monitoring the spread of contagious diseases, as well as being in charge of disease control. His tasks also included the charge of four leper hospitals, the Reykjavik penitentiary and the two episcopal seats. The Surgeons General at Nesstofa paved the way for the development of a health service in Iceland. He was the country's only physician for six years, until two district physicians were appointed in 1766. Pálsson's pioneering work, his perseverance and diligence laid a permanent foundation for Icelandic health services and served as proof of the feasibility of the Icelandic domestic medical studies established almost one hundred years later.

Medical studies were virtually entirely theoretical, as there were no hospitals in Iceland, the first such institution being built in 1866. One of the roles of the Surgeon General from 1760 to 1772 was preparing and dispensing pharmaceuticals. In 1771, the first Icelandic pharmacist, Björn Jónsson, completed his studies in Copenhagen and became an apothecary. Icelanders had access to a single pharmacy for almost 70 years. When Bjarni Pálsson came to Iceland as Surgeon General in 1761 he brought with him a qualified midwife, and one of the roles of the Surgeon General was to educate capable women as midwives. The midwife studies conducted in Nesstofa represented an important milestone as there was great need for increased knowledge in maternal and infant care. Nesstofa became a sort of teaching hospital, or the equivalent of a medical university for physicians and a vocational school for midwives.

The development of health care services in Iceland in the eighteenth century was influenced by the Enlightenment. The annual increase in population in Iceland was 50% of that in Denmark and 40% of that in Europe at the same time. Mortality was high in the famine that followed volcanic eruptions in 1784-1786. Infant mortality was high, reaching 74% in 1784 and remaining at 22% in 1786-1820; it did not begin to fall until 1870, with the spread of breast-feeding. Disease control was ordered in 1773, leprosy control was strengthened in 1776, and vaccinations were started in 1786 and passed into law in 1811.

After 1800 there was some stagnation in the development of health care, and the number of medical students at Nesstofa was reduced, with no physician graduating in Iceland from 1801 to 1863. Medical studies moved increasingly to Copenhagen, and many of the medical positions in Iceland were held by Danish physicians. There were 6 medical districts in all until 1799, usually manned by only one physician. Prior to 1800, eight Icelandic physicians came to work and from 1801 to 1837 eight Icelandic physicians arrived and six Danish physicians. Around 1840 there was a shortage of physicians in Iceland, with only eight district physicians in the country.

The organised development of health services in Iceland in 1760-1833 is rooted in the medical training offered at Nesstofa and by Bjarni Pálsson. Nesstofa was for 70 years the headquarters of seven Surgeons General, the residence of five pharmacists and an institute of learning for physicians, pharmacologists and midwives. Nesstofa therefore became a centre of culture and education for decades. Unfortunately, the health of the Icelandic population did not change appreciably until the end of the nineteenth century, when medical training and knowledge of the cause of diseases and defences against them became more general. One hundred years after the beginning of medical training in Iceland it was understood that extensive medical services could be developed in this country if medical education were moved from Copenhagen to Iceland, if the number of medical districts and physicians were increased and if the education of midwives were improved. If it had not been for the training offered in Nesstofa it may be assumed that the development of a health services in Iceland would have taken a much longer time than it in fact did in the second half of the nineteenth century. The path was cleared by the activities conducted at Nesstofa for a continuous period of 70 years.

Keywords: Nesstofa, Surgeon General, Iceland Health System,, Medical Education

20. SWEDISH PHYSICIANS AND DENTISTS IN THE POLITICAL TURMOIL OF THE 1930'S – RELATIONS TO NAZI GERMANY

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Several Swedish physicians and dentists were actively involved in the political debate during the 1930's, and some of them showed sympathy for the ideological trends that were proposed by Nazi medicine, or in racial biology. Some of these professionals regarded themselves as independent but some joined national movements or Nazi parties. For research of today it is challenging to try to understand the ideological and political development of this pre-war period and how it influenced medicine and dentistry, not at least in the area of public health. Some physicians of interest were the following Åke Berglund, Ivar Broman, and Hugo Toll, among others.

Åke Berglund (1898-1976) was the most prominent of Swedish nazi-oriented physicians. He was working as a general practitioner in the Stockholm area and wrote many papers and pamphlets devoted to public health, social medicine, and racial biology. During the early years of the Second World War he stayed in contact with the Quisling authorities in occupied Norway. Berglund was regarded by the Swedish police as a potential leader or member of a government if Sweden should also have been occupied by German army forces. After the war, Berglund tried to defend his thesis at Karolinska Institute I Stockholm in 1954, but it was not approved by the academic board at the Institute. Later in life he turned into a Christian believer and left some earlier ways of political thinking. The Swedish physician and professor of anatomy *Ivar Broman* (1868-1946) was active in Lund, southern Sweden. He signed, among 400 other people, a pamphlet calling for establishing a Swedish-German friendship organisation in 1938. He was not a member of any Nazi party, but was, similar to other of his contemporary friends and scientists, an admirer of German science and culture. In some of his writings Broman was very modern in trying to popularize science and new discoveries, but also devoted to aspects of purifying the population and using racial biology arguments. The lesson from Ivar Broman is that a devoted and skilled scientist, with many modern views, could also hold some authoritarian and politically darker views. This could be an example of a "Faustian" dilemma in science during a period of political tensions and distant thunders of war. *Hugo Toll* (1858-1943) was brought up as the son of a farmer in mid-Sweden. Through many years Hugo Toll devoted much time and efforts to writing and lecturing on public health, healthy lifestyle matters, and other topics related to medicine. As many other authors of this time, he also included views based on racial biology and the positive health selection of future parents. At this time some Swedish physicians were more or less openly committed to Nazi ideology, such as Åke Berglund, Herman Lundborg, and Gösta Häggqvist. Other physicians were never members of any Nazi party, or did not see themselves as believers in any similar ideology. However, in their lectures and writings, a mixture of ideas upon public health was revealed, some of them also related to Nazi ideology. My impression is that Hugo Toll, although an elderly man and almost blind in the 1930's, was one of many Swedish physicians and debaters with ideas that other, more ideologically determined physicians with strong political views could make use of. Therefore, in current times we can learn from the experience of Hugo Toll that physicians with strong beliefs in public health and a healthy lifestyle can provide arguments that others can use in a different context for darker purposes

Characteristic for the Swedish dentists during the 1930's and 1940's was their silence towards the purging and extermination of their Jewish colleagues and political opponents to the Nazi regime in Germany. In contrary, about six percent of the Swedish dentists were organized in pro-Nazi organizations, during 1942-1943, the main part in the Swedish-German Society (Riksförbundet Sverige Tyskland, RST). Among them several well-renowned dentists like Dr. Henry Beyron, a well known prosthodontist, and Dr. Gustav Köhler, representative leader of the South Swedish Dental Association in Malmö. The professional contacts between Swedish and German dentists had a long history before the Nazi period, but contributed more political aspects and purposes during the war. In 1943, 27 Swedish dentists applied for an educational study tour to German war hospitals, among them the active member of the Swedish Nazi-party, Dr. Uno Holmer.

In conclusion, these personal biographies of physicians and dentists can be of interest to study because they show the life of academic professionals during a historical period with strong political influences on the academic professions. The concept of public health was debated from different political perspectives. Nazi medicine and ideology was not always clearly stated, but several arguments proposed by these physicians and dentists could also have been used by extremist political parties and national movements, for example related to racial biology.

Keywords: Dentist, Germany, ideology, physician, politics, public health

21. LACK OF MEDICINE IN ICELAND DURING THE NAPOLEON PERIOD

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In the beginning of the Napoleon period 1790-1815 Denmark was a wealthy state and had a big merchant fleet. England and France both wanted Denmark as their ally but the Danes wanted to stay neutral. When the English attacked Copenhagen in September 1807 and ruined the Danish fleet, Denmark became the ally of France.

In the following blockade Denmark lost contact with Norway and Iceland, which both were very dependant of import from Denmark. Danish officials were concerned about the consequences of the blockade and were aware of lack of medicine in Norway. Even the king himself was worried. The officials were trying to find a method to ration the medicine supplies in Norway.

During the blockade Iceland was isolated and there were almost no news from Iceland. The Icelandic people didn't get the news of the attack on Copenhagen until March 1808, six months after the episode. The Icelandic pharmacist got some medicine supplies in the spring 1807 and again in 1809. This is a study of how people in Iceland, the Medial Inspector of Health and the Pharmacist coped with the situation.

22. THE DANISH COLLECTION OF THE HISTORY OF PHARMACY – A “WORKING” MUSEUM

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The Danish Collection of the History of Pharmacy in Pharmakon, Hillerød, is owned by the Danish Foundation of the History of Pharmacy. The board of the foundation consists of ten members, who represent the organizations, institutions and authorities in the field of drug in Denmark. The foundation acts as a united framework for the activities of the history of pharmacy in Denmark. The object of the foundation is to carry out museum work to the illustration of the history of pharmacy in Denmark and in collaboration with the Danish Society for the History of Pharmacy to promote the Danish research into the history of pharmacy and to extend people's knowledge of the history of pharmacy. The foundation performs its museum and other activities in the Danish Collection of the History of Pharmacy in Pharmakon.

The Danish Collection of the History of Pharmacy illustrates the operation of the pharmacies and the pharmaceutical industry, and also the history of medicines during the last 100 years. The collection consists of a pharmacy section, a tablet manufacture section, and a medicine exhibition.

In the pharmacy section, the visitors firstly meet signs, symbols, jars, and pictures from Danish pharmacies, and next tools, apparatus, and machines used for the workmanlike manufacture of medicines in the pharmacies, and also bottles, boxes, labels, stamps, and prescription envelopes used in connection with dispensing of medicines in the pharmacies. In addition, the pharmacy section includes a collection of pharmaceutical books and documents.

The tablet manufacture section includes tablet machines and other apparatus used in connecting with production of tablets in Danish pharmacies and pharmaceutical companies. The section illustrates the development of the tablet manufacture from craft to industry.

The medicine exhibition shows a selection of medicines from Danish pharmacies as well as pharmaceuticals from Danish and foreign industrial companies for illustration of the development of drugs from low- to high-technological products.

A selection of apparatus and machines in the collection is put in original and workable state by restoration, and we are therefore able to demonstrate the manufacture of medicines for the visitors. In addition, the restored apparatus and machines make up the ornamental objects of the collection together with an exhibition of pharmaceutical antiquities.

Keywords: Museum of pharmacy, history of pharmacy, history of pharmaceutical industry, manufacture of medicines, Denmark

23. EARLY DANISH INDUSTRIAL DESIGN – APOTHEKARY PACKING AND LABELS

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Packing and labels are an important part of our social and cultural history.

The development of packing and labels began in the early part of the industrialisation of mass production, in the second part of the 1800 century. To the manufacture belonged a new market in which advertising, packing and labels played an important role. Lithography played an important role in this development too. It managed to give the goods a different look so people wanted to buy them and lithography was also cheaper to produce than engravings which were used before. During the first part of 1900 the labels and packing became more and more colourful and exiting. It was the golden period for Danish packing culture. Earlier most of the packing was bought in Germany, but after the war in 1864 most pharmacists wanted a domestic production and many factories were founded.

The pharmacists also took part in this development and very elegant packing and labels were designed for them. Each pharmacist had his own special packing and labels. Many of them were created so beautifully that the customers later used them for other purposes. This was a good way of advertising.

The pharmacists had always been concerned about the packing because they had to sell so many different types of medicine. They had to have a large and varied assortment of packing. There was however a major problem because all packing was returned to the pharmacies, where it was cleaned and given a new label. The packaging was then given to the customer again. Especially ointment jars were not pleasant to receive.

In the 1940'es many pharmacists complained about this and wanted a standardisation like the pharmaceutical factories had and disposable packing. But it was not until 1965 the Danish pharmaceutical societies demanded it and in 1968 al packing were disposable.

Keywords: Packing, Labels, Design, Pharmaceutical

24. THE HISTORY OF PHARMACY FROM THE WORLD OF MAGIC TO THE CHEMICAL LABORATORY

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From the earliest times of which we have some information, homo sapiens has sought to discover effective remedies for disease and injury. This was achieved by applying his knowledge of the curative properties of substances extracted from natural elements. Later this knowledge was gathered in bestiaries, books of mineral and herbaria.

In prescientific ages man could not explain the diseases that afflicted him. He was convinced that mysterious forces of evil, unleashed by angry gods were responsible for them. Thus the medicines he used were determined not only by the knowledge of beneficial properties of substances, but also by his reliance on the arts of the witch-doctor or on experts of magic, astrology and alchemy, as happened to the ancient civilizations of the East. Egyptians attributed medical virtues to various familiar fruits and vegetables.

In Greece, a more critical approach developed, based on observation and experience. Much credit is given to Hippocrates of Cos and his followers. In Greece, pharmacology emerged and developed within the context of dietics. Oil and wine with their symbolic and nutritional value seemed to bridge the gap between dietics and pharmacotherapy. Both oil and wine were used throughout the history of Greek and Western medicine. Traditional knowledge of the effects of herbs and various foods was preserved by writers of the Hippocratic School, while in Theophrastus' *Historia Plantarum* we have the scientific description of plants.

In Roman history, Celsus and Pliny, the so- called "Encyclopaedists" made a synthesis of all the knowledge acquired in the course of medical and pharmacological history, while Galen revived the ancient teachings of Hippocrates.

During the Byzantine times a number of compilers tried to describe the classics of ancient medicine, while during the first centuries of the Middle Ages, a more positive attitude on the part of Christian monks led to the preservation of classical science and the revival of medicine. Herbaria were very popular that time.

The Arabs' attitude to nature contributed to the enrichment of their pharmacology. Arab science assimilated and developed all the Greek medicine and pharmacology. There were a lot of Arab compilers of pharmacopea and prescription books, translations of which were later revised and commended on in the Universities of Europe and had a decisive influence on medieval pharmacology in the West. Italy was the centre of the trade in drugs. Doctors prepared medicines themselves. The apothecary was confused with the doctor and many quarrels happened between them until the thirteenth century.

The middle of the sixteenth century is characterized by the birth of Renaissance science, a mania for printing and restoring of classical texts. Botanical gardens were created with the view to organizing the study of pharmacology better. There was also an increase in the number of medicines of animal derivation. That time Paracelsus advocated the use of chemical compounds in medical treatment, while official pharmacopea were published and were in use all over Europe.

At the end of the nineteenth century the "germ theory of disease" of Pasteur and Koch, offered a lot to the progress of pharmacology. That time Paul Ehrlich was investigating what he called "chemotherapy", the cure of bacterial infections with substances of known chemical identity.

By progress of biomedical sciences and with man's growing knowledge of the chemical nature of natural substances endowed with therapeutic properties, the range of medicines was extended. Later an increasing number of synthetic products prepared in specialized laboratories was joined to them. With the progress of biophysics and biochemistry, pharmacology has made a big progress and is now considered one of the most advanced frontiers of science.

Keywords: Pharmacology, history, substances, pharmacopea, medicines

25. THE LIBRARY OF THE SWEDISH ACADEMY OF PHARMACEUTICAL SCIENCES

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An important book-collection is housed in the handsome premises of the Swedish Academy of Pharmaceutical Sciences. For practical reasons public access is limited but interested persons may visit the library, which is designated a specialised library.

The first catalogue dates from 1824 and refers to 34 works of which 12 are duplicates. At present some 11 000 volumes are documented, including off-prints. The librarian's duties of tending and running the library have expanded to include responsibility for proposing the purchase of new books of importance for the pharmaceutical profession. There is nowadays a library committee which meets several times a year when pressing matters can be discussed. Many donators, most particularly Ernst Matérn and C.D.Carlsson, have endowed the library with books of great value, and also funding for further acquisitions.

Over the years the quantity of pharmaceutical literature has reached such proportions that it is impossible for the library to acquire it all and a policy has been adopted of concentrating on specific sectors. Apart from the most important pharmaceutical books, above all Swedish books and those of our own publication, priority is given to certain periodicals, catalogues, annual reports, registers, etc. Valuable donations still occur.

To the librarian falls also the task of receiving visitors and replying to enquiries. These can concern varying aspects of research. Solutions are facilitated by the use of the comprehensive data base. Visits are welcome, even from those not actively engaged in serious research. Browsing through the literary works at the Swedish Academy of Pharmaceutical Sciences is both entertaining, rewarding and frequently surprising.

26. THE CULTURE MATTERS: FROM PHARMACEUTICAL CLINIC TO THE SCIENTIFIC CHINESE MEDICIN

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Dispensing medicine in clinic has a long history and still existed in many Asian areas. That means private doctors in these places are dispensing their own drugs, unlike in other countries where drug dispensing must be done by pharmacists. The separation of prescribing and dispensing (□□□□) is a whole new concept that may fit in the modern/western medical standards, but the design overlooked cultural and social elements that, ironically, support the medical modernization in Asian countries in the 20th century. The conflicts to against the separation of prescribing and dispensing in Japan (1970s), Taiwan (1990s), and Korea (1990s) revealed that such hybridized pattern of clinical practices (pharmaceutical vs. diagnostic) was not only the compromise of the scarcity in medical resources, but also a rational choose of the private clinician in the pre-1945 medical system in Eastern Asia. Meanwhile, the rise of Chinese herb components in over-the-counter medicine since the 1980s showed the pharmaceutical manufactures successfully applied the cultural metaphors within the market promotion. Taking from cultural images of medicine, some Asian people tends to see herb medicine moderate and supplement, while western medicine represents radical and poisonous. Both phenomena of pharmaceutical clinic and the boom of herb medicine indicate culture really matters in practicing modern medicine in Asia. Beyond the economic analysis and modernization dogma, this paper will discuss how traditional culture shaped patient's expectation to medical practice and their consumption habits. Also, the author would like to explore the historical roots and structures forming dispensaries or pharmaceutical clinics in Japan, Taiwan, and Korea, where the clinicians practice like a hybridist of pharmacist and physician.

27. PHARMACISTS IN ICELAND 1760–2000

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In July of this year, the Pharmaceutical Society of Iceland published a new “Lyfjafraeðingatal”. This publication contains information about Icelandic pharmacists and many foreign pharmacists, most of whom have worked in Iceland. The publication spans the period from 1760 to 2002 and is the successor to the first “Lyfjafraeðingatal” which covered the period from 1760 to 1982.

The “Lyfjafraeðingatal” contains various information about pharmacists, which is traditional in a publication such as this, e.g., about parents, grandparents, the spouses and children of pharmacists, education and career, bibliography and if they are related to other pharmacists.

Also in the “Lyfjafraeðingatal” are chapters showing the year of graduation of each pharmacist, information about pharmacies and list of everyone that is mentioned in the book, to name but a few topics.

The editor of the “Lyfjafraeðingatal” 1760–2002 was Axel Sigurðsson, pharmacist (deceased 1 May 2002). With him in the editorial committee were Áslaug Hafliðadóttir, Finnbogi Rútur Hálfdanarson, Guðrún Baldursdóttir, Þ. Helga Kristjánsdóttir, Jóhann M. Lenharðsson, Jónína Þ. Guðmundsdóttir and Óskar G. Jónsson (deceased 19 May 2002).

The Lyfjafraeðingatal 1760–2002 will be briefly introduced and, among other things, an explanation will be given on how information such as this was obtained for this publication.

28. THE HISTORY OF THE PHARMACY MUSEUM IN ICELAND

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The decision to locate the Pharmacy Museum at Nes in Seltjarnarnes was made because of its proximity to Nesstofa where the first Director of Health (Surgeon General), Bjarni Pálsson, chose to build a house for himself after he was appointed in 1760. Bjarni Pálsson also supervised all sales of medicine in Iceland at the time. Bjorn Jonsson, pharmacist journeyman, who was employed at the Directorate of Health, sailed abroad and finished his Master's Degree and was the first to receive an appointment for a pharmacy in Nes in 1772. Then the house and the land belonging to it, now called Nesstofa, were divided between the Director of Health and the Pharmacist and since then, there was a pharmacy there until the year 1883 when both positions were moved to Reykjavik, making Reykjavik Pharmacy the oldest pharmacy in Iceland.

There have probably been more changes in the working methods of pharmacies during the last 50 years than from the time the first pharmacy was established in Nes in 1772. Fortunately, several people of the profession have kept various things, but it was in the year 1978 that the first committee was appointed to collect relics connected with pharmacy. That led to the formal establishment of the Pharmacy Museum in 1985. It was immediately apparent that there would not be any substantial collection of objects until we would acquire an accommodation. After making inquiries we heard that the cowshed belonging to Nesstofa was for sale. The management of the museum considered this an ideal option and a contract to buy was completed in the autumn of 1986. With the collective action of all the pharmacists and companies related to pharmacy, we managed to acquire the house and reconstruct it and today it is the debt free property of all those who are educated in pharmacy in Iceland.

Pharmacists have also done voluntary work both in painting and cleaning the house and also in mending the objects of the museum and setting up exhibitions.

The museum was formally opened in 1994. On display there is the main equipment which has been used for making medicine for centuries. Although the objects of the museum were mostly made in the former half of the last century, the equipment has for the most part remained unchanged, to the extent that present time factories still build on the same technique as is shown at the museum, although it is somewhat more efficient nowadays.

A sample of pharmacy built-ins from the first decades of the last century are also on display.

29. THE HISTORY AND MUSEUM OF DENTISTRY IN ICELAND

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The history of dentistry in Iceland is relatively brief, and it was not until about 1960 that ideas surfaced of setting up a museum of dentistry, which was met with some scepticism at first. The paper discusses the beginnings of dentistry in Iceland, starting with the work of the first Icelandic dentists, who studied and worked in Denmark in the early 19th century, and the first Danish dentists who practiced in Iceland in the late 19th century. The search for exhibits for the museum turned up some interesting specimens, even from the pioneers of Icelandic dentistry, and some of these are shown on a series of illustrations. Finding suitable premises for the museum proved difficult at first, but it is now housed in premises supplied by the Icelandic National Museum and there are hopes that it will soon be possible to invite visitors to browse through the history of dentistry in Iceland and trace its progress through time.

30. HISTORY OF DENTAL MEDICINE IN THE ORIENT

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Dental disorders have been a problem through the ages, and they depend on the art of vegetation people consumed. Poor Egyptians had healthier teeth than rulers. Egyptians are said to care for their mouth hygiene, and to practice some kind of surgery for abscesses and fractures of the mandible, that was shown in Mummies.

The myth of the tooth worm was established in Babylon, and Babylonians knew how to deal with tooth ache as the removal of teeth.

The Phoenicians from the seventh century B.C. left in Lebanon traces of developed dental handcrafting in two with gold wired teeth.

The Arabs in the Arab peninsula used the Arak root as toothbrush called Siwak, and was even propagated by the prophet Mohamed in the seventh century as part of religious ritual during wudu" Washing before praying. The Arak tree was known long time ago, even by Babylonians, Egyptians, it is a plant of the Middle East.

Arab physicians in the Islamic Period mention in their books always the treatment of tooth ache and tooth problems. Avicenna did not mention any surgery.

Al-zahrawi in his book "Altasrif" (Albucasis , on Surgery and instruments) mention the treatment of loose Teeth with golden wires and illustrates the equipment necessary for tooth extraction and the treatment of dislocated and fractured mandible and stressed that treatment should be carried out by physicians.

31. DENTAL DRUGS DURING THE BYZANTINE TIMES (330-1453 AD)

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INTRODUCTION AND OBJECTIVES: The main dental drugs used in everyday dental practice during the eleven Byzantine centuries (4th-15th) are presented and commented.

MATERIAL AND METHODS: The information about dental medicines derive from the most significant medical texts of the famous physicians of that period, who preserved and reproduced the knowledge of the Ancient Greek World about medicinal plants, mainly represented by Dioscorides and his treatise entitled “De Materia Medica”. The eminent Byzantine doctors and their works were studied especially Oribasius (4th c.), Aetius of Amida (6th c.), Alexander of Tralles (6th c.), Paul of Aegina (7th c.), Symeon Seth (11th c.), Michael Psellus (11th c.).

RESULTS: The number and variety of medications applied, reveal the high level of Byzantine Dentistry. The description of the natural elements in the medicinal plants from which they are picked, their therapeutic properties and consequently their indications are evident of a professional status of dentists. Dental drugs are classified according to their origin (plants, animals, minerals) and their use (preservation of oral health, prevention of dental caries, tooth whiteners, cosmetic reasons, diseases of the supporting tissues, cleaning of artificial teeth, treatment of malodour, relief of pain, management of cavities). The analgesic and narcotic action of other drugs is also known and broadly applied in tooth extractions and everyday practice of oral surgery, as well as amalgam fillings with minerals and various materials. Pagan influences can also be traced as usual alternative to scientific methods in Medieval times.

CONCLUSIONS: The impressive pharmaceutical references in the medical texts represent the effectiveness and the possibilities of dental care, from the hygiene and preservation of teeth to complicated operative techniques.

Keywords: *Byzantium, Dental Care, History of Dentistry, Medicinal plants*

32. TOOTH WEAR IN MEDIEVAL ICELANDERS

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Background

The soft processed diet consumed by modern Western people has been shown to cause relatively little tooth wear. Recently, however enamel erosion caused by excessive consumption of softdrinks, has emerged as an epidemic among some groups of teenagers. Archaeological human skull material worldwide has revealed extensive tooth wear among most human groups. The main cause is believed to be consumption of coarse, rough diet. In the Skeljastaðir graveyard in Þjórsárdalur valley near mountain Hekla, sixty-six skeletons were excavated 1931 and 1939. The dating period of occupation of Skeljastaðir is based on tephra (volcanic ash) chronology from the eruption of Hekla in the year 1104. The purpose of this study is to evaluate tooth wear in Icelanders 1000 years ago.

Material and methods

Fifty-one skulls were available for research. Two methods were used to evaluate tooth wear. The first according to the classification: 0 = no wear, 1 wear in enamel, 2 dentin exposed, 3 exposure of pulp cavity. The second method was based on Brothwell's twelve wear stages. For age estimation five methods were used based on developmental stages of teeth, one on tooth wear and one of ectocranial suture closure. The adult skeletons were sexed using morphological characteristics from skull, mandible and in few instances pelvis.

Results

Mean tooth wear was 1.9, where 1 is wear in enamel, 2 dentin exposed and 3 exposure of pulp cavity. There was significantly more wear in the older age groups than in the younger groups and no significant difference between sexes. The highest score of wear was on first molar, which also had the highest prevalence of root abscesses, and the lowest score was on third molar.

Conclusion

Tooth wear seen in the Skeljastaðir population has all the similarities seen in wear from coarse and rough diet. But in some instances it has similar characteristics as seen in erosion in modern Icelanders consuming excessive amounts softdrinks and other acidic beverages. A mixture of acidic whey and water was a daily drink in Iceland until the 20th century and whey was used for preservation of food. It is postulated that consumption of acidic drinks and food in addition to coarse diet has played a significant role in the dental wear of the Skeljastaðir population.

Keywords: *Paleodontology, tooth wear, Skeljastadir, Iceland*

33. DENTAL HEALTH IN VIKING AGE ICELANDERS

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Background

The Skeljastaðir site is in Þjórsárdalur valley in southern Iceland, 15 km north-west of volcano Hekla. In 1931 and 1939 sixty-six skeletons were excavated. The dating period of occupation of Skeljastaðir is based on tephra (volcanic ash) chronology. It is believed that the destruction of the Þjórsárdalur settlement was from the eruption of Hekla in the year 1104. The purpose of the present study is to try to evaluate the dental health in Iceland 1000 years ago.

Material and methods

Fifty-one skulls were available for research. For age estimation five methods were used based on developmental stages of teeth one on tooth wear and one of ectocranial suture closure. The adult skeletons were sexed using morphological characteristics from skull, mandible and in few instances pelvis. Tooth wear, distance from cemento-enamel junction to alveolar bone crest, tori of the jaw skeleton, abscesses and other pathological conditions were recorded.

Results:

In the age group 17 years were 3 skeletons, 2 in the 18-25 group, 11 in the 26-35 group, 29 in the 36-45 group and 6 in the 46 year group. 25 of the population were female, 24 were male and for 2 the sex was unknown. Tooth wear was considerable as well as the CEJ-ABC distance. The prevalence of torus palatinus was 39.5 %, less for females. The prevalence of torus mandibularis was 50.0 %, with no sex difference. Root abscesses were found in 43% of skeletons. No certain diagnosis for caries was found. Skeleton ÞSK 17 has a protruding tooth 11 which has been ground for cosmetic reasons.

Conclusion:

Results of age and sex are similar to result of former investigators and slight difference is between methods. Heavy tooth wear can be explained by food habits. Prevalence of tori was lower than results of former investigators but much higher than in modern population. Increasing CEJ-ABC distance is not due only to periodontal diseases but also to the eruption of teeth due to excessive tooth wear. Teeth most frequently having abscesses are the first molars which are also the teeth with highest rate of dental wear. The ground tooth in skeleton ÞSK 17 is probably the first case in cosmetic dentistry in Icelandic history.

Keywords: *Paleodontology, Skeljastadir, Iceland*

34. A HISTORICAL CONFLICT BETWEEN MEDICINE AND RELIGION THE PAEDIATRICIAN VERSUS THE BISHOP

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In 1950 the paediatrician Bertil Söderling (1905-1989) in Sweden attacked the Swedish bishop Bo Giertz (1905-1998). The focus and reason of the attack was Giertz' book for young confirmands, "Grunden" (The Ground). Söderling thought that the book was dangerous for mental health in children. Giertz preached a reactionary message of original sin and hell. The Swedish National Board of Health remitted the report to the Society of children psychiatry. After that the question went further to the government. The minister of internal affairs finally dropped the issue without any measures. The formal considerations took about one year and during this time an intense discussion took place in media. Both Söderling and Giertz participated but also a lot of other more or less prominent persons. The Söderling-Giertz conflict occurred the year after the Swedish philosopher Ingemar Hedenius famous fight against representatives of Swedish theology in 1949.

My study is based on material in the archive of late Bertil Söderling (manuscripts, letters and cuts from daily papers), literature and an interview with the brother of the late bishop Bo Giertz. Based on this material I present a chronologic description of this hitherto historical unknown conflict. I also use this description as an example and illustration of the complex relation between medicine and religion. Religious liberty and freedom of expressing an opinion are opposed by the medical task of supporting the mental health of children. Further questions that is touched in this study is whether disease is a result of sin and crime against God.

The Söderling-Giertz conflict is a classical example of the opposition between rational medicine and dogmatic religion. In medical history blood transfusion, vaccination and variolisation, intensive care, abortion, euthanasia and stem cell therapy are example when religious doubts about medical practice has occurred. The Söderling-Giertz conflict is about medical doubts of religious dogmatism. In contrast to this recent research has shown that religious commitment is a strong predictor for recovery after somatic disease and also a factor for reducing depression.

Keywords: Medicine, religion, humanities, mental health, philosophy.

35. AN EXAMPLE OF THE INFLUENCES AND TRANSFERENCES OF THE ANCIENT EGYPTIAN TO THE GREEK MEDICINE: THE *wxdw* THEORY

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It is undeniable that the ancient Egyptian medicine has had strong influence in different spheres of pre-hippocratic medicine. Although it is difficult to determinate the transmission of medical usages or therapeutic materials it is easy to perceive that both employed the same scientific and rational systems for the patient's therapy, the knowledge about the use of same drugs and medicines, the conceptions about the causes of sickness and their relation with magic, faults or sins and external forces, the development of the anatomy, the transcription of documentary materials, nearly word by word, from the Egyptian sources to Greek works about pregnancy test or interpretations of dreams. In addition, the Hippocratic medicine adopted the incubation practices of the Egyptian temples and their accurate observation of reality to work out causal conceptions and universally applicable theories.

But the most outstanding transfer was the aetiological and pathological concepts identified with the theory of gastrointestinal residual or *wxdw*. These ideas allowed to display a range of possibilities and reinterpretations of that treatise into the different Greek medical schools. This bright brilliant Egyptian hypothesis on the role of putrefaction in the aetiology of disease, engendered by superfluous parts of ingested food, opened the road to a coherent and scientific therapy and mark the kickoff of the evolution of the Greek thought. The Cnidian medicine school absorbed the substantial bases of this Egyptian medical theory and arrived, step by step, through various systems of Greek medicine, at the hippocratic humoral doctrine of the Cos school.

Objectives: to show different influences of Egyptian medicine regarding especially the theory of gastrointestinal residual or *wxdw*.

Method: comparison of different medical sources of both civilizations.

Result: Different evidences of interinfluences about the dissemination of medical knowledge

Conclusions: a gradual evolution of the theory of gastrointestinal residual taken from Cnidian medicine school leading to the hippocratic humoral doctrine of the Cos school.

Keywords: Putrefaction, aetiology, interinfluences, humours

36. REGULATION OR ABOLITION? CAMPAIGN AGAINST PROSTITUTION AND VENEREAL DISEASES IN INTERWAR POLAND

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Attempts to control epidemics and spread of communicable diseases have always created kind of controversy as they meant limiting of individual's rights and freedom against collective protection. As sexually transmitted diseases endangered not only the health of the individual but also posed a threat to the health of the population, at the turn of the 19th century campaign against venereal diseases became one of the most important issues to be tackled by the authorities. Healthy society was to guarantee independence and victory in the international struggle for existence. Social Darwinism, being a way of explaining of political discourse into biological language, justified the state's interference in biological processes which occurred in social life. It was stressed that venereal diseases affect the health conditions of future generations and bring about further degeneration of the human race. Therefore campaign against prostitution and sexually transmitted diseases constituted the part of eugenic programme. In Poland the roots of eugenic movement can be traced back to the 1914, when The Society to Combat Venereal Diseases and Prostitution was founded, which in 1918 changed its name to The Polish Society to Combat Race Degeneration and finally in 1921 to The Polish Eugenic Society. Eugenic movement aimed at the abolition of prostitution. In the old system of regulation, first introduced in France at the beginning of the 19th century, they saw a step towards acceptance of this undesirable social phenomenon. In interwar Poland so called neo-regulation policy was introduced. The system banned public brothels but still guaranteed medical check-ups and sanitary control of prostitution.

37. 'CENTRE' OR 'PERIPHERY'? THE DIFFUSION OF EUROPEAN SCIENCE IN THE LATE-XIX AND EARLY XX-CENTURIES: THE CASE OF BACTERIOLOGY

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The diffusion of European scientific knowledge to the rest of the world is a complex phenomenon which has been studied from different perspectives. One of them proposes that the process began in the so-called 'central' countries of Western Europe (specifically Britain, France and Germany) and, via a relatively simple mechanism, was spread to the 'peripheral' countries of the rest of the world. This paper offers a more complete and less simplistic analysis than the aforementioned Eurocentric model. It argues that, although the 'central' countries provided science with its theoretical foundations and its systematisation, this does not necessarily mean that the 'peripheral' countries accepted them into a vacuum. On the contrary, the 'central' science continuously fed itself from the empirical understanding generated in the 'periphery', and, at the same time, countries outside of Europe occasionally functioned in a 'central' manner with respect to others in their regions with fewer resources. Moreover, Britain and France, for example had had a close scientific relationship for many years, during which each of them had occasionally functioned as either the 'centre' or the periphery. In other words, scientific knowledge is disseminated via a series of networks and circuits whose nature changes according to circumstances. This paper examines this phenomenon from the particular perspective of the transmission of bacteriological knowledge during the late-XIX century, shortly after the discoveries of Louis Pasteur, and the early-XX century.

The paper draws upon material from Latin American archives (notably from Mexico) to illustrate its arguments, but its principal sources are those encountered in British and French repositories (notably the historical archive of the Liverpool School of Tropical Medicine and that of the Pasteur Institute of Paris), and a wide corpus of theoretical literature, mainly sociological and historical, about the processes by which scientific knowledge was/is diffused.

Keywords: Bacteriology, diffusion of science, scientific knowledge

38. ICELANDIC FAMILY SAGAS AND THE QUESTION OF HUMAN PERSONALITY

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39. NEUROLOGY AND NEUROPSYCHIATRY IN ICELAND. CAN LIMITED HISTORICAL UNDERSTANDING THWART PROGRESS?

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During the latter half of the nineteenth century neurology began to develop as an independent speciality. In England, France and the United States neurology developed from internal medicine. In Germany, however, the development of neurology was impeded by the dominance of neuropsychiatry following the appointment in 1865 of Wilhelm Griesinger to the Chair of psychiatry at the Charité Hospital in Berlin. In publications from 1880 onwards Wilhelm Erb and other German neurologists complained bitterly about this state of affairs calling for the liberation of neurology from the chains of psychiatry.

In Iceland medical specialties were formally recognised by the legislature in 1932 and the first two neurologists received their certification in 1938 and 1942 respectively. Both had received their training in Denmark. Prior to this patients with neurological disorders had been treated by general practitioners, internists and neuropsychiatrists.

The first mental hospital in Iceland (Kleppsspítali) was founded 1907 and between 1923 and 1969 fourteen Icelandic physicians were officially recognised as neuropsychiatrists. Neuropsychiatry was considered a dual specialty, including training in both neurology (one year) and psychiatry (two years) and was to a large extent rooted in the German neuropsychiatric tradition. In practice, however, these physicians were primarily considered to be psychiatrists.

In 1967 the first hospital department of neurology was established. At that time there were two neurologists working in Iceland and three more were recruited within the next 4 years. During the first 18 years of its existence the department of neurology was situated within the main building of the National Hospital (Landspítalinn) and admitted patients with acute as well as more chronic neurological problems. The psychiatric wards were located in the mental hospital on the outskirts of the city. This changed in 1982 when a new building for psychiatry was opened on the grounds of the National Hospital. In 1985 the department of neurology was moved into the new psychiatry building and was then no longer geographically connected with the main hospital buildings. During the next 14 years the development of neurology was considerably thwarted because patients with acute neurological diseases were to a much lesser degree primarily cared for by neurologists.

The main reason for relocating neurology to the psychiatry building was the demand for more space by other medical specialties. The close historical links between psychiatry and neurology served as a convenient justification for this decision - as neurology had initially emerged from neuropsychiatry it was considered just and proper for these two disciplines to be housed together. The important roots of neurology in internal medicine were disregarded. This provides an example of how inappropriate interpretation of history can be used to justify ill-founded decisions in the health care system. The concerns of the first German neurologists were probably long forgotten.

Keywords: Neurology, Neuropsychiatry, History, Landspítali, Kleppsspítali, Iceland

40. EVIDENCE BASED MEDICINE (EBM) AND THE INTERPRETATIONS OF EVIDENCE

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We will show that the interpretation of evidence has been the most attractive and supportive part of the new methodology of evidence-based medicine (EBM). By focusing on the success of randomized controlled trials and meta-analysis, EBM has provided a tantalizing new methodology for rational acceptability; the least biased. The position of EBM is to emphasize finding the most reliable evidence base and, e.g., having established that randomized controlled trials are the gold standard for therapy, it follows the application to individual patients only requires reliable, clinical judgment: this is insufficiently expanded upon in the descriptive definition below. This latter requirement remains problematic for it questions the interpretation and objectivity of evidence.

Further, we will show that the interpretation of evidence not only is insufficiently worked out, or 'a work in progress' as some say, but is impossible to sort out by objective methodology alone since hard medical facts are not shorn of value as they occur in e.g. RCTs; and that a distinction between fact and value cannot be overlooked in an attempt to make interpretation objective or unbiased i.e. a clinician must recognize that the results from RCTs cannot be applied by using statistical techniques alone, e.g. entry criteria between the study population and the individual patient. Nor can value-added analysis be performed post facto to encompass the missing clinical variable (s) e.g. risk and benefit, nor events in the trial that are not endpoints, or are insufficiently reported in outcomes, or follow-up is lacking. Or any number of objections and reservations in letters to the editor post trial. In fact RCTs may be read differently and when combined into systematic reviews provoke more controversy than consensus.¹ Some of these reviews and meta-analyses strain the notion of clear cut results in part because of the abstruse methodologies.

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41. SICKNESS AND SOCIETY . DIFFERENT PERCEPTIONS THROUGHOUT THE CENTURIES

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Perceptions of sickness have varied greatly over time and place. In traditional societies ,in which medical skills were transmitted only orally ,sickness was regarded as an affliction visited upon its victim by some individual force, a witch, a ghost, a demon, etc. Illness was thought to be a reprisal or a punishment .In that meaning ,healing involves community where rituas in ceremonies cleanse the polluted. The medicine of Greeks and Romans on the other hand, bequeathed a complex message. Hippocates of Cos, the father of the scientific medicine, believed that sickness was of the body and that the body formed part of the comprehensive economy of Nature(‘physis’). Greco-Roman medicine was ‘holistic’. It focused upon the ‘humours’of Hippoctratic theory, that is the fluids whose equilibrium was vital for life. It assumed that health and illness were ‘organic’, that is they were deriving from inner processes and that all aspects of the patient were interlinked ,so that the body was influenced by passions and emotions. The Greek medicine adopted a constitutional or ‘physiological’ doctrine of sickness during the Middle Ages and the Renaissance. Sickness was the result of physical processes and not of spirit possession or sorcery. Medical thinking was influenced by the Ancients for a long time, until the tradition was challenged by the scientific revolution.

But before that ,throughout the Middle Ages we find some similarities with the traditional concepts of sickness because of the influence of the religion.Christianity offered some explanations of suffering and death. Disease could be regarded as God’ s punishment for the wicked. In early Christianity ,holly individuals had been encouraged to mortify the flesh, especially at times of civil crisis, plague and pestilence. But from the start, Christianity was a healing religion. Catholicism involved itself in healing rituals. Holy people have claimed healing gifts. Epidemics ,as the bubonic plague, often excited confrontations between the Church and the medical profession, public authorities and the people as to the meaning of diseases and the measures required. Witchcraft was a cause of contention between the medical and religious outlooks. A new ‘science’ was created during the seventeenth century by the philosophers Descartes and Hobbs. According to Descartes the body was viewed as a machine and sickness as a form of mechanical breakdown. The big progress in anatomy and physiology during the eighteenth century, the Age of Enlightenment, had profound implications for conceptions of health and disease. In a rationalist atmosphere, belief in diabolism was condemned as bigoted or psychopathological.

Also the development of the biomedical science claimed an explanatory monopoly over the body and its treatment. But systematic epidemiological and pathological research programmes did not develop until the nineteenth century. Questions as to the true causation of the disease remained highly controversial. Many kinds of sicknesses were attributed to personal factors. Theories that diseases spread essentially by contagion were also in mind. Before the discovery of microbial pathogens late in the nineteenth century by Pasteur, that gave rise to the ‘germ theory’ of disease, the primal source of disease was believed to be miasma. The rise of pathological anatomy gave new conceptions to disease theory, whereas during the nineteenth century the laboratory and the hospital played a major part in establishing disease as objective(‘ontological’),physical entity. This laid to a shift from ‘physiological’ to ‘ontological’ conceptions of science. Finally the progress in genetics and

biology and the mapping of all human genetic material during the last century has totally changed old conceptions about some diseases that have a genetic basis.

Keywords: Disease, perceptions, history

42. VIKING AND MEDIEVAL MEDICINE

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As far as northern Europe during the Viking times and the Middle Ages, that is, between ca. 800-1500, is concerned the term “disease” must be interpreted much more broadly than it is today. The diseases of the early and late Middle Ages also included all battle and everyday injuries as well as mental illnesses such as melancholy and love sickness, dog and snake bites, scorpion stings, parasitic infestations of fleas and lice and even pregnancy, because in these times the woman was considered to be “eigi heil”, that is: not healthy.

One result of this is that the medical treatments are also very complex and represent a mixture of magic, folk medicine, orthodox medicine and monastic or monk’s medicine.

Thus the medicine has features not only of old traditional treatments, but also those current in the Middle Ages. They contain heathen and Christian thought, experience from folk medicine and elements of the scholarly Hippocratic and Salerno schools of medicine.

Information on this is found in the lives of the saints, medical texts and archaeological finds, for example skeletons from graves in Scania, on Bornholm, Zealand, and the Jutland peninsula. Furthermore medical details found in old Nordic fictional literature, which the author of the saga used to a variable extent to characterise his figures and can certainly be interpreted as reflecting reality, contribute to the understanding of the medicine of that time. This can be seen, for example, in many Icelandic sagas and in particular the Hrafn saga Sveinbjarnarsonar.

In the presentation four of the medical treatments used in Viking times and in the Middle Ages in the North, magic, folk medicine, orthodox medicine and monastic or monk’s medicine, will be introduced and finally an attempt will be made to determine the main areas of their application and to associate these with the migration of texts from the Mediterranean area to northern Europe.

43. THE PALAEOPATHOLOGY OF ICELAND

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The palaeopathology of Iceland is an ongoing research project at the Institute of Archaeology, Iceland. The aim of this project is to carry out a complete palaeopathological study of 400 skeletons found in archaeological excavations in Iceland, dating from the settlement period in the 9th century until the 19th century, to increase the understanding of the health of Icelanders in the past and lay the basis for further research in this field. For this purpose the age and sex of each individual has been assessed and their stature calculated as well as recording all palaeopathological changes on every skeleton and these used to diagnose, where possible, specific diseases. Although all diagnosable diseases are recorded, the main emphasis is placed on nutritional disease, infectious disease, trauma, changes associated with activity related stress and dental disease (carious lesions, abscesses and periodontal disease), as these are the factors which give the clearest idea of general health within a population. This paper will aim to present the main results from the project to date, which is due to be completed in 2006.

Keywords: *Osteoarchaeology, palaeopathology, health, demography, archaeolog*

44. THE BURIALS OF HRISBRU, ICELAND

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During the summers 2001-2004 an American-Norwegian team of scientists have executed archaeological excavations on the Hrisbru farm at Mosfell, Southwest Iceland. This farm was Egil Skallagrimsons last resort and the place where he died about 990.

Already during the first summer the church and the churchyard were discovered, as mentioned in Egil Skallagrimsons saga. Many skeletons were also found, - graves from the transition time between Viking Age paganism and Medieval Christianity in Iceland, often showing strange and unaccustomed burial habits, as expected when a new faith is still unestablished.

The lecture will present a brief survey of the results so far.

One of the graves was found directly against the south wall of the church ruin. All the bones lie assembled in a heap, and on top of them a whale bone was placed. Obviously these bones had once been taken from a pagan grave mound – like the ones of Egil himself – and according to the saga the whale bone, marked with a Christian cross, should be regarded a magic protection against evil forces.

From a medical point of view it was interesting to see some of the skeletons with pathological changes due to severe infections, probably tuberculosis, a disease which must have epidemically visited the family or the people once living on Hrisbru farm.

Keywords: Early Christianity, Iceland, Hrisbru, Skeletons, Tuberculosis

45. THE BERSERKS IN THE ICELANDIC SAGAS

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The Icelandic Sagas were written in the 13th and 14 century in Iceland describing events that took place almost 200 years earlier. The sagas tell the stories of the first Icelandic settlers and their families, ancestors and descendants. The Sagas contain numerous narratives about dramatic events where fate and believes in certain moral and ethical values play a great role. The sagas are a very bloody reading with many battles and fights where the main heroes are defending their honour and their families. The sagas have a clear ethical view on heroism and death which often is based on the old Nordic mythology and the collection of poetry that is called Havamal.

Everyone should die as he had lived and the great human shortcomings were cowardice and dishonesty.

The invincible soldiers berserks are to be found in many Icelandic sagas. They often seem to come from nowhere and they do not have the well defined family history as most other actors in the sagas have.

They were soldiers of fortune fighting for those who paid the best salary without the usual moral and ethical values that characterize most other fighters or heroes of the sagas.

The berserks kill everyone that stands in their way without any chivalry or scruples.

They are invincible as no weapons can harm them.

The berserks are in many ways the wickedness and evilmindedness personified often in a sharp contrast to the virtuous main characters of the sagas.

The berserks play the role of the villains in the sagas which often serves to emphasize the honesty and the integrity of the main heroes.

The berserks are all eventually killed by the heroes of the sagas as if to emphasize the Christian philosophy that the good will always defeat the evil.

46. THE VIKINGS AND MULTIPLE SCLEROSIS

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Epidemiological studies have shown that the Scandinavian countries and those settled by Danish and Norwegian Vikings (England, the Orkney and Shetland Islands, Ireland, Iceland, the Faroe Islands, etc.) have the highest prevalence of multiple sclerosis (MS) in the world. It is also high in Minnesota where 25% of the population is of Scandinavian descent compared to less than 5% in the entire United States. The raids and eventual settlement and intermarriage of the Vikings all over Western Europe are well known. In addition to the countries already mentioned, they founded Normandy, conquered Sicily, southern Italy and even the Canary Islands, and may have reached eastern Canada. They were active participants in the first crusades and many settled in Palestine, marrying local women. Less well known are their voyages from Sweden and the island of Gotland. Traveling by river they roamed southeast, founded the cities of Kiev and Nijni-Novgorod which were to become the foundations of the Russian Empire. The term "rus" is derived from the Old Norse word for "men of the waterway." Their conquest of Byzantium in the IXth century gave them access to the Balkans, Greece, and the Near East as the Varangian Guard, part of the Byzantine army. Eventually some of their descendants reached China where they also formed a separate unit of the army under the Yuan Dynasty in the XIVth century. Mercantile contacts, in particular the slave trade, with the Arabs are well documented by the discovery of Arab coins in Norway and in Iceland dating from the IXth century. Indirect contacts with China, probably via Arab traders, produced the "Buddha bucket" found in a Viking grave in Norway dating to 850 AD. As recently as the early XVIIth century, North African Arab pirates raided the island of Heymaey, off the southern coast of Iceland, carrying away and enslaving women and children. A search of the Icelandic sagas failed to produce any indications that MS existed in Iceland prior to the XIXth century, but what may have been a case of acute disseminated encephalomyelitis was described in the story of St Thorlacr in the late XIIIth century.

**47. ARCHAEOLOGICAL AND HISTORICAL TRACES OF MEDICAL TREATMENT ,
AS PRESENT IN THE MEDIEVAL CATHEDRAL OF RIBE, SOUTH JULAND,
DENMARK**

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In the late 1990'ties big areas have been excavated in the central part of the medieval Ribe. The excavated areas included two monasteries, one of the order of St. John and one Franciscan Monastery. Among the found artefacts from the two monasteries grounds are six items, now investigated and interpreted as medieval surgical instruments. Pictures of all six instruments will be shown and explained. Besides the archaeological evidence written traces of medieval physicians now prove that medical treatment may have taken place in Ribe before the Reformation.

48. HOT SPRINGS AND GEOTHERMAL POOLS IN MEDIEVAL ICELAND

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There is an abundance of geothermal energy in Iceland, resulting in more than 700 hot springs on the island. These have been utilised since the settlement of Iceland for washing, cooking, bathing and recreational purposes. In some cases the hot springs became a meeting place and a venue for social gatherings for communities in neighbouring areas. The hot springs were believed to be wholesome and some of them were held in high regard in that respect, attracting people seeking relief from various ailments. Shelters were erected over fumaroles creating geothermal steambaths. The steam baths were considered the most effective treatment for arthritis and rheumatism.

The Icelandic sagas often refer to bathing in geothermally heated pools in instances related to killings or other major incidents. It can be inferred that the utilisation of geothermal energy for bathing was too commonplace to mention otherwise.

The lecture will describe four steam baths which were renowned for their healing powers and specific instances in the sagas where geothermal pools are mentioned.

49. HISTORY OF MEDICINE IN ICELANDIC MANUSCRIPTS FROM 1600-1800 ORIGINS AND DISTRIBUTION

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In the manuscript department of the National and University Library of Iceland there are numerous manu-scripts from 16th to 19th century that contain various aspects of medical science and practice. In my paper I am going to demonstrate the Icelandic tradition of distributing medical text, both of professional origins and popular. All these text have in common that they are a part of an Icelandic tradition: texts, originally printed and published in Denmark, were translated in to Icelandic, copied by handwriting many times and altered to suit Icelandic needs. Names of authors changed over the years, translators became the authors and the copyist also became the author. It was not until the late 18th century that texts of medical science were printed in Icelandic.

50. ASSOCIATIONAL LINK BETWEEN ICELANDIC AND LITHUANIAN MEDICAL HISTORIES: ICELANDIC MOSS AND THE BEGINNINGS OF MEDICAL LITERATURE IN LITHUANIAN LANGUAGE

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Objectives: The research focuses on the so far unnoticed by medical historians publication by Theodore Brandenburg (1776-1837) “On the cooking of dishes using Icelandic moss...” The book is regarded as the forerunner of the Lithuanian medical literature. Although thematically the book falls into the category of farming and housekeeping, and could be attributed to the field of new technologies and promoting scientific knowledge, it discusses the issues of nutrition as a one of the fundamentals of human’s health and physiology. The paper discusses the place of the publication in the context of the Lithuanian and neighboring countries’ medical literature, emphasizes its scientific importance, and looks into links with contemporary attempts to promote Icelandic moss (*Cetraria islandica*) as nutritional resource. For the first time in Lithuanian historiography the so far unknown facts of Brandenburg’s biography are revealed.

Methods: A descriptive-comparative method, as well as the method of synthesis were applied while conducting the research.

Results: Lithuanian medical literature has old traditions. Its roots go back to the end of the 16th century when first books on medical issues were published in Vilnius. Unfortunately, it was only in the 20th century that the medical literature in Lithuanian language became established on firm professional foundations. This was influenced by the development of national university medical education and development of general medical infrastructure in the newly independent Lithuania. Still, the beginnings of medical literature are to be found at the crossing of the latter half of the 18th and the beginning of the 19th century. “On the cooking of dishes using Icelandic moss...” by Theodore Brandenburg, published in 1823, has for many years drawn the attention of scientists not only because it was one of the first secular books in Lithuanian language, but also because it was translated into Lithuanian by a prominent figure of the Lithuanian society, writer Simonas Stanevičius (1799-1848). The book was the subject of research by literature, book science and science historians, as well as philologists as the source of terminology for farming, housekeeping, and introducing new scientific concepts. All these researchers failed to notice the fact that the book speaks about nutrition from the public health care point of view and the energetic value of nutrition from physiological point of view, i.e. about areas pertaining to the field of medical science. In addition, the recommended herb is wide-spread, and the author of the original text was a pharmacist.

The work of Theodore Brandenburg is dedicated to promoting Icelandic moss as an ingredient substitute, especially for baking bread products. It summarizes the practical experience of various foreign researches, as well as that of the author. Iceland is given as an example of a country which was the first to recognize the benefits of the moss. The herb has for a long time been known as a restorative. T. Brandenburg claims that it is widely used as the means to restore the strengths of the sick and even helps to gain weight. The biggest disadvantage, according to the author, is herb’s bitterness that can be removed only using lye. An advantage, on the other hand, is that the moss can be found in Russia’s northern gubernias, Lithuania, Byelorussia. The author admits that his recipes are meant for peasants’

nutrition. The book was distributed in Vilnius and Kaunas gubernias via chief noblemen and parish priests.

Till recently “Rules for poor people on how to protect from cholera...” published in Kaunas (first edition 1848, second 1852), was regarded as the first medical publication in Lithuanian language. This brochure provided information for state peasants about cholera, its symptoms, curing practices and prevention.

Conclusions: RESEARCH MATERIAL SHOWS THAT THE BEGINNINGS OF THE LITHUANIAN MEDICAL LITERATURE REQUIRE FURTHER INTERDISCIPLINARY RESEARCH.

Keywords: *History of the Lithuanian medical literature.*

51. EARLY MODERN DANISH HOME MEDICAL ADVISERS FOR THE COMMON MAN

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From the beginning of the 16 century vernacular home medical advisers started to appear in Denmark like in several other european counties, for instance Germany and England. The books were written or rather 'sampled' from antique, medieval and contemporary sources by the secular as well as the clerical elite and had the common man as intended reader.

The books were ment to be 'do it yourself' books, enabling those, who had no access to an authorized doctor, to get proper treatment. In the books the elite presented in a popular way the medical knowledge of the time, such as it was thought in the medical faculties of the universities all over Europe, in order to prevent the common man from using all the competing offers of treatment, placed at his disposal by the varied and tangled group of alternative practioners on the broad market of cure. The writers of the home medical advisers harshly attack their unauthorized competitors; What they regard as nothing but quackers do not only deprive their clients of money and health but also of their soul and the eternal life. If the common man has no possibility what so ever of frequenting a skilled doctor at least he is better off curing himself and his household by the help of the books provided for him by the medical expertice than by using the services of all the different kind of quackers, which traditionally has served people outside the most important cities or people without economical means to pay for the attension of an autorized doctor.

The home medical advisers usually consist of a manual of medicine and a herbal, framed by extended prefaces.

The prefaces deal with the question of the causes of diseases and death. Causes have to be identified on different levels of reality. There are ultimate causes and releasing causes.

The ultimate cause of diseases and death is sin. All the books maintain a Genesis of death and disease, with identifies both the originate sin and the daily sins as the prime causes of all evil, including the pains and decomposition of the body. Adam and Eve were created for immortality and eternal life, but they abanoned the commandments of God and fell into the sinnfull world. As their ancestors took after the old Adam sickness and death invaded the body and the life of man became still shorter. In the first world man still became more than 900 years old, but the process of penetrating sinfulness meant, that the duration of life at the time of Moses had been reduced from 900 years to about 80 years.

The original sin has thus once and for all cut man off from eternal life and reduced him to weakness, sickness and death. But this is not the only ultimate cause of desease. Man contributes on an every day basis to his own destruction. The daily sins - abundance in food and drink, laxity, everlasting craving for the benefits of the world- destroy the health. The daily sins create the unbalances in the bodily fluids, that are the releasing causes of all diseases.

The manuals of medicine study the diseases of the body from the head and downwards from a humoral pathological perspective; Which are the unbalances in the bodily fluids, that have released the specific illness? And what cure is needed for this unbalance? The cure always aims at the regulation of the bodily fluids and the means are bloodletting, vomiting, bowel movement, diets and herbal remedies. In this way the structure of the manuals of medicine move from diseases to cures, where as the herbals move from herbs and herbal mixtures to specific diseases: arguing to maintain their focus on the use of herbs, that are common and thus accessible and affordable to everyone.

52. SCHOOL HEALTH SERVICES AND HEALTH EDUCATION: THE NORWEGIAN EXAMPLE IN THE 20TH CENTURY

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The first international school hygiene conference was organized in Nürnberg in 1904. Most European countries send their delegates to the conference, which was composed of seven sessions. The topics of the conference can be seen as reflections of the main public health interests addressing school authorities and schoolchildren.

Europe and the United States had since the 1880's seen a notable increase in public concern over children's health. A number of measures were taken to protect and control children and their environment. Sunshine, fresh air, adequate food, cleanliness and a minimum of physical training, in addition to vaccination and what was seen as descent lifestyles, seemed to be what the expertise recommended. Isolation was a must to combat contagious diseases.

School health services only became obligatory in Norway in 1957. School meals never were, although implementation of school meals for all schoolchildren has been discussed repeatedly. Prior to the 1950s and starting in the late 1890s, however, a large number of the country's municipalities, and especially the cities, had established both school health services and free school meals, and, not least, the school's potential as a means in the general education of the population in new habits of hygiene and nutrition were early explored by the public health movement, acting in company with school authorities and teachers. Thus, school health services and health education and propaganda in schools were not only about children's health, but also about the health of the nation.

This paper will focus on schoolchildren and public concern for healthy children and a healthy environment for children in Norway. In the paper, school health services, school meals, the control and health education will be paid special attention. On the one hand we will make an analysis the construction of the healthy urban child and how the healthy child was defined by various groups at various stages. We also take an interest in the means employed, not only to prevent illness, but also to improve the quality of children and consequently that of the population. Medicine seldom played the dominant role, but doctors were always important in decision-making and control. On the other hand we will focus on public attention towards the environment, especially to the school buildings and school health services. We will discuss how children in primary school, and specifically through school health services and school meals, were targeted in the service of public health: What was the focus in the health messages given to school children in different phases, and which were the means used to get the messages through to the children? The questions concern also how teachers as well as the children's families were brought under the influence of the health expertise.

Our discussion is based on an analysis of material from different sources. We focus on official policy documents, such as preparatory documents and green papers addressing legislation regulating school health services. We follow parliament discussions and discussion over legislation or green papers in the most central professional journals, such as the Norwegian medical journal and the Nordic Journal for Hygiene (from 1920-1970). On the other hand we also use material from the one case study covering the school health services in the city of Bergen.

53. HYGIENE AT THE IMPERIAL VILNIUS UNIVERSITY (1803 – 1832)

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Objectives: The beginning of the XIX th century has ushered not a few innovations in the Vilnius university. In 1803, the Basic school of the Grand Duchy of Lithuania turned into the Imperial Vilnius University and continued scientific traditions of its antecedent. During a short history of the University 1803-1832 – great changes in it were caused by the political situation: the University fell under the Russian czar's power. According to the activities of the University it is reasonable to divide this period into three stages: 1803-1814, when the University was organized on a new basis; approximately 1814-1823 was the flourishing period; and since 1823 – it has been the period of repressions of tsarist power up till the closure of the University in 1832.

Reforms of the Vilnius University began in 1803 together with the reorganization of the whole Russian education system by the tsarist government. The reform stimulated a further growth and development of medical science. The University became an administrative education centre of a huge imperial district which hosted a lot of youth from Lithuania, Belarus and Poland. The times when medicine was a repulsive science had passed long ago, and the number of medical students was rapidly growing at the University. It became one of the most popular specialities chosen by different castes of people. The mostly frequented lectures of the Medical faculty were that of chemistry, anatomy, therapy and surgery.

The first works on hygiene.

A prominent professor who began his pedagogical career at the Vilnius University, a doctor of medicine and chemistry, head of the Therapy chair and the clinic Andrew Sniadecki mentioned the problems of children's physical training and hygienic education as well as the period of their sexual maturity in his work „Remarks on the physical bringing up of children“ (1806). The key goal presented in the program of his work is promoting hygiene habits of children. When writing about contagious diseases, A. Sniadecki stated that the reasons for their spread were insufficient nourishment, bad living, sanitary and hygienic conditions. He was confident that a man can infect others in different ways, traditionally by communicating and having direct contacts with others. This kind of outlook was the proof of progress at that time.

In other works, the scientist described a poor everyday life of peasants, intolerable conditions of life, and lack of rights of countrymen.

In 1810, doctor J. Szymkiewicz, the initiator of orthopedy in Lithuania and Russia, discussed about the morbidity and preventive measures of younger schoolchildren in his book „Science on children's diseases“.

J.P.Frank has developed an original disease prophylaxis system called “Medical police...” The professor's work reveals the problems on social health care, maternity care, physical training, etc. Four volumes are devoted to hygiene: the ways of improving and preserving the physical state of population as well as conditions of their life and reproduction, the issues of children's health care (especially school premises), general aspects of nourishment and public hygiene have been considered and some topics on labour hygiene and epidemiology touched. This work has been analysed in various respects the authors of a collection of papers “190 years to hygiene in Lithuania” (1997) leaned on this

work as well. The significance of J. P. Frank's work for the development of hygiene and social medical sciences has been proved and unquestionable.

The professors of Vilnius University were the first to start investigating the reasons that cause diseases as well as to develop preventive activities against epidemics raging at that time, against superstitions and other bad habits. Conclusions: THE BACKGROUND OF HYGIENE STUDIES MEDICINE FACULTY WAS BASED BY PROFESSORS' OF VILNIUS UNIVERSITY.

Keywords: Hygiene, medical faculty, Vilnius University

54. THOUGHTS BEHIND THE REBORN MUSEUM OF MEDICAL HISTORY IN BORÅS, SWEDEN.

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In 1989 the Museum of Medical History in Borås was opened. Like many other small museums of its kind it was located in the basement of a building in the hospital area. Some interested people of various professions had collected the collections, and most of them belong to the 1940s and later. From the beginning the work was all voluntary, but it soon became possible to raise money to employ one person to be in charge of the collections and to have the museum open three hours a week. After some years we had two people working in the museum, a former nurse and a museum curator. We had visions and tried to develop them and make the museum more relevant for people of today, bringing up topics that were of interest in our own time. One of the obstacles difficult to fight was the location and our small facilities. Another was, of course, money.

In the end of the 1990s there were plans made for building a new entrance to the hospital. We saw a chance to get a location there, "in the middle of the stream" so to speak. 320m² were given to us. We had to prove that we were useful in some way. One can always declare that it is important that people have the opportunity to look at the past, to be able to understand the present. No one can argue with that, but we had to come up with something more. One reason was that the museum could be used for exhibitions and other activities related to public health. It would be good to show that the hospital took an interest in public health and even in preventing disease. Spending time in the museum while waiting for your lab results or your turn at the pharmacy, would hopefully also give a new dimension to your visit to the hospital.

We wanted the museum to be available most hours of the day, even though it would not be possible for us to be there at all times. We solved that problem by making the exhibitions as secure as possible and having security guards at the hospital open the museum at 7 o'clock a.m. and close it at 9 o'clock p.m. Three days a week, three hours a day we are in the museum to meet our visitors. Naturally we have guided tours on demand.

After having been closed for two years we have our former visitors back, such as nurse students, school children, groups of senior citizens and so on, but we also have an increased number of hospital staff members spending some time discussing the treatments of old times, remembering some of the local profiles we present. One of the most, if not the most important kind of visitors, are the patients, all categories. That has required sensitivity, on our part, so as not to provoke anyone into feeling offended.

Unlike many other museums of Medical History we have chosen not to overcrowd the exhibition with a great amount of artefacts. Every object therefore represents both itself and its historical use, but is also given the status of an art object. Some visitors have declared, " - You have made a museum that is a mixture of a museum of Medical History and a museum of art!"

Keywords: Museum of medical history, hospital, public health

55. DENTAL HISTORY AND THE DENTAL MUSEUM OF VIENNA

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Prof. Georg Carabelli, Edler von Lunkaszprie, (1797- 1842) was internationally the first to give lectures on Dentistry at a University. He started as a surgeon in the Austrian Army but specialised early and dedicated his live to dentistry. His collection of dental exhibits was used for his presentations and later given to his successor Moriz Heider (1815 –1866). Heider, one of the first members of the medical society of Vienna, tried to establish dentistry as an equal part of medical education. For this reason the collection grew and was finally given to the first Dental society of Austria (founded in 1861).

After many vain attempts to found a dental college in Austria Prof. Julius Scheff (1946 – 1922) was commissioned in 1890 to be the first director of a Dental School in Vienna. Since then the Dental School developed to the Dental Clinic of Vienna, since July it received a new name: Bernard Gottlieb University Clinic. The Dental Collection of this institution is one of the most beautiful ones of Europe and comprises many dental chairs, instruments and many other dental collectibles, beautiful pictures, drawings and embodiments of the dental profession. There is a wonderful human skull collection and the dental development of the different species is documented as well. The main interest of the present director of the dental museum is to show that the modern advancements of dental medicine cannot be understood without the knowledge of the historical development of this interesting profession.

56. THE ESTABLISHMENT IN 1976 OF THE NORDIC SOCIETY FOR THE HISTORY OF MEDICINE

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Although the history of medicine as a field has traditions of various ages since the 19th century in the different Nordic countries, congresses for medical history did not start until 1967, when the first Nordic Congress for Medical history was held in Gothenburg, Sweden in 1967. It was not until 1975, when the V Nordic Congress for Medical History was held in Helsinki, Finland, that the idea occurred of developing closer Nordic cooperation within this field. The father of this idea was Professor Harald Teir, president of the congress held in 1975. Together with the official congress invitation, he also invited representatives of all the Nordic societies to a discussion about more permanent Nordic collaboration in the field of medical history and the possible formation of a Nordic society in this field.

These discussions were followed by a preparatory meeting with representatives of the different Nordic societies, held on 6 December 1975 at the Medico-historical museum in Copenhagen. Finally, at a meeting at the Stockholm Museum of Medical History on 27 March 1976, the Nordic Society for the History of Medicine was founded. Authorised representatives of the nine Nordic societies of medical history took part in this meeting. The purpose of the new society - which has no individual member, is to be a society of societies, with the object of stimulating and supporting research, teaching and museum activities in the history of medicine. The members of this society are the different local Nordic societies for the history of medicine, dentistry, pharmacy and veterinary medicine. Under the society's rules, the chairman is president of the next Nordic congress. The first chairman elected at the founding meeting in Stockholm was professor Wolfram Kock, who was going to be president of the VI Nordic Congress for Medical History in Stockholm in 1978. Other members of the board were Professor Øivind Larsen from Oslo and Hindrik Strandberg MA from Helsinki, who was elected General Secretary.

Once the society had been founded, Professor Wolfram Kock wrote in his chronicle in 1976 that: "It is to be hoped that the newly founded society will be able to help itself to perform its important task by co-ordinating its resources as regards personnel and finance. Its initial purpose is to collect information about the instruction in medical history given in the various faculties of medicine in the Nordic countries.

A symposium on instruction in medical history, arranged by Professor Øivind Larsen under the auspices of the Nordic Federation for Medical Instruction and the Society, was held from 30 September to 1 October 1976 in Oslo. The following year, in August 1977, the new society was one of the organisers of the Scandinavian Seminar on Popular Medicine held in Kristinestad, Finland.

The rules of the Society were later ratified by the national Nordic societies.

POSTERS

P 1.THE HISTORY OF ARTIFICIAL PACEMAKERS

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As early as 1791 Galvani published his observations that a moving electric eel could stimulate the frog heart and skeletal muscle. Hyman's artificial pacemaker, built in 1932, had some disadvantages with a weight of 7,2 kg and it had to be wound up every six minutes to generate the electrical impulses. Bigelow and Zoll used external stimulation of the heart with electrodes placed on the chest. The next step was to attach electrodes to the exterior surface of the heart, that was stimulated through wires connecting the electrodes to the battery, that the patient was wearing in a pocket. The battery life was short so recharging by connecting the battery to an ordinary electric plug was necessary. The first implantable pacemaker with no equipment situated outside the body was built in 1958 by R Elmqvist and operated by Å Senning in Stockholm. Transvenous long-term stimulation was also a Swedish invention. The first indication was Adams-Stokes attacks in patients with complete heart block. The attacks appeared because the heart stopped beating, causing loss of consciousness. B W Johansson could show that the mortality decreased in these patients when they received an artificial pacemaker. Initially, the pacemaker electrode was placed in the right ventricle. Later it was shown that atrial pacing was of value. The indications have also broadened, including biventricular pacing in patients with severe congestive heart failure.

Keywords: History, pacemaker

P 2.EPIDEMICS DUE TO DYSENTERY IN SWEDEN

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The purpose of my thesis is to study epidemics caused by dysentery in Sweden, to map how the disease ravaged the country and how it changed over time. In particular, I investigate factors behind the almost complete disappearance of the disease in Sweden towards the middle of the nineteenth century.

Different kinds of organisms can cause dysentery, but the great epidemics seem to be caused by the *Shigella* bacteria, more specifically the *Shigella dysenteriae*. To simplify, dysentery is a condition with diarrhoea that contains blood. In severe cases the disease also includes abdominal cramps, fever and rectal pain, and in many cases, as we can see in statistical records, can have a fatal outcome. This is the case even today in many developing countries. Dysentery is today a rare disease in Sweden. About 500 hundred cases are reported every year but hardly nobody suffers from its severest consequences, and most patients have contracted the infection abroad. Historically, however, dysentery has caused a lot of suffering and many deaths. In his thesis from 1869 A.G. Bergman wrote of the disease then ravaging in Sweden: "Of all the epidemics, which have afflicted our country since the plague last haunted the Nordic countries, there is, from what we can tell from our statistics, not one that from time to time has caused such extreme mortality as dysentery. Not even smallpox, cholera and typhoid fever, can we except from this." During the period 1750-1830, dysentery was responsible for more than 200.000 deaths in Sweden, but after the middle of the nineteenth century it had lost its importance as a cause of death.

My thesis consists of three studies: an inventory of theories on the spreading of dysentery, a study of its regional differences, and an analysis of which factors caused the disease to disappear. In the first study I examine information booklets from provincial doctors, articles in magazines and writings from *Collegium Medicum* to find out what doctors and other writers thought made the disease spread and how to cure it; their theories of the causes behind the disease, their interpretations and putting into practice of this knowledge. In the second study, I look at the long-term regional differences on a county level between the years 1750-1900. Identifying regional differences enables me to see changes over time and where and when the disease disappears. The third study takes a detailed look at which factors can explain why the disease disappeared almost entirely as a cause of death in the middle of the nineteenth century and focuses mainly on various aspects of hygiene and improved nutrition. The material studied includes ten parishes, carefully selected according to their rates of high or low mortality in dysentery.

In this paper, I give examples from the second interest area of my thesis: regional differences in dysentery affliction. These examples show that even though there exists a strong correlation between crises such as crop failures and high mortality and high mortality in dysentery this cannot explain all cases. How then can we explain regional differences in mortality due to dysentery? Can answers to this question help us explain why the disease almost entirely disappeared a century later?

Keywords: Dysentery, Epidemic

P 3. HOFSTAÐIR IN MÝVATNSSVEIT: AN ICELANDIC MEDIAVAL CEMETERY

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The ongoing archaeological investigation at the chapel and cemetery at Hofstaðir in Mývatnsveit, dated to the 11th-15th century, have revealed the remains of two chapels surrounded by at least 100 graves, 75 of which have been excavated to date. This is the largest excavated chapel cemetery in Iceland, and preliminary results indicate that the skeletal material from the site will be a valuable resource in osteoarcheological research in Iceland. This poster aims to present the main results of the excavation to date.

Keywords: *Hofstaðir, Mývatnsveit, chapel, cemetery, archaeology, osteology*

P 4. THE SETTLEMENT OF ICELAND: ANALYSIS OF STRONTIUM ISOTOPES IN HUMAN TEETH

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This poster presents a study of the process of colonization in Iceland through the use of strontium isotope analysis of human tooth enamel from skeletons dating to the pagan and early Christian periods. Although strontium concentrations in plant and animal tissue vary with trophic position, the isotopic composition of strontium is not changed (fractionated) by biological processes due to the very small relative mass differences of the strontium isotopes. The strontium isotope composition of bones and teeth, therefore, will match those of the diets of the individuals, which in turn will reflect the strontium isotope composition of the local environment. As the enamel of teeth does not change during an individual's lifetime, the strontium isotope composition of the enamel will match the strontium composition of the environment where that individual lived until about 6 years of age, when most of the enamel is fully formed. As Iceland has one of the youngest geologies on earth, it has one of lowest strontium isotope signatures. Any migrants from northern Europe to the island will exhibit highly distinctive strontium isotope ratios in their tooth enamel. A total of 90 skeletons, from pagan graves all around the country and from two early Christian cemeteries, Haffjarðarey in Haffjörður and Skeljastaðir in Þjórsárdalur, had tooth enamel samples taken for strontium isotope analysis in an attempt to isolate the immigrants. The results were very promising, immigrants were identified, and indicated that this method could also be used to study variations in diet and movement within Iceland.

Keywords: Settlement of Iceland, osteology, isotope analysis, strontium, diet

P 5. GENERAL PRACTITIONERS IN TURKEY : A HISTORICAL PERSPECTIVE

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During the Ottoman Empire, until the mid of the XIX th century medicine was influenced by the eastern cultures and Islamic rules. Medical education was not organized and had been realized by mastering and coaching and the medical diplomas were arranged with the names of the masters. Health services were given in the capitol city (Istanbul) through the orders of “Hekimbasi” (head of all the physicians; surgeon general) and in the other parts of the country through “Darulshifa” (a kind of hospital) or private practices. In this period three types of physicians were commonly seen : general practitioners, surgeons and kehhal (a kind of ophthalmologist).

At the beginning of the XIX th century, Ottoman Empire was influenced by the western cultures and some attempts were made for the modernization of the medical education but they failed. On 14 March 1827 the first medical education facility was established in the capitol city. Like many other educational institutions of the Ottoman Empire this faculty was based on military basis and its mission was to graduate two types of physicians: General practitioners and surgeons. In 1838 an Austrian associate professor Dr. C.A. Bernard took the responsibility of arranging the medical curricula for this school. With his efforts, clinical training and anatomical dissection applications were a part of the curricula. The language of this school was in French and students who were not able to learn French were accepted only for the surgery training. In 1839 a third educational department was established and this was for pharmacy. First time in 1847 four students were sent to Vienna (Austria) for medical education and after this the medical faculty of the Ottoman Empire was accepted by the Europeans. The first civilian medical education facility was established in 1867 and the educational language of this school was in Turkish therefore after this period the number of the physicians had risen rapidly.

After the foundation of the Turkish Republic Ministry of Health was established. The era of modernizing medical education and health services begun. The first minister of health created incentives for medical education by offering free accommodation and scholarships. As a result the number of physicians grew from 554 in 1923 to 2387 in 1940. The main objectives of the health care system were to establish preventive care and eradicate highly prevalent infectious diseases like malaria, tuberculosis, typhus, typhoid fever and cholera. Curative services were done mainly by local authorities (municipalities). General practitioners had extra incentives which the secondary and tertiary physicians did not. Private practice was forbidden, all doctors were obliged to work for the Ministry of Health, but they were well paid. The health system of the country was organized vertically with an emphasis on specific diseases and model hospitals for these diseases were built.

The second medical faculty of the country was established after the Second World War with the assistance and influence of German scientists. Preventive and curative services were integrated by health centers and for every health center two general practitioners were appointed. During this period focusing on curative services became more important and private practices were allowed. Therefore being a general practitioner loose its importance and specialization became a dominant promotion among medical graduates.

The 1960s saw significant developments in Turkish health care. Two important laws introduced major changes. It was acknowledged that health care services should be delivered

equitably, continuously and in accordance with the population's priorities. Therefore health centers on population basis were established throughout the country and for every 5.000 population one general practitioner was appointed. The aim was to provide health care (preventive+ curative) to citizens free of charge, subsidized by the government budget. Between 1960-1980 general practitioners became important again and they were supported by the government both financially and morally. The goal of enabling people to go first to health centers instead of to hospitals could not be achieved. Because of financial obstacles, high migration rates from rural to urban areas and rapid population growth the system come into the point of breakthrough.

Since 1980 discussions about the health care reform, family practice, national health insurance and decentralization were made but nevertheless these efforts did not succeed in solving long standing problems such as the loss of confidence in public health services, inequalities in the geographical distribution of health care personnel and the loss of self esteem and promotion among general practitioners.

Today about 45.000 general practitioners were waiting hopefully for an improvement (both financially and morally) in their situation and every year about 5.000 general practitioners who are graduated from the 51 medical faculties of the country are being added to them.

Keywords: Turkey, general practitioners

