"SCIENTIFIC NEWS" IN THE LETTERS FROM PETER HERNQUIST TO CARL LINNAEUS AND ABRAHAM BÄCK

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In 1763 Carl Linnaeus and Abraham Bäck sent Peter Hernquist to the recently opened veterinary school in Lyon. Hernquist remained in France (in Lyon and Paris) until 1769. In his correspondence to his benefactors he tells them about his tough financial situation, the low level of education in the veterinary school in Lyon and the contempt associated with the veterinary profession. But he also brings what he himself calls "Scientific news" (Swedish: "lärda nyheter"). To Bäck he sends news within medicine and to Linnaeus - not surprisingly information on botanical and zoological matters. Examples of the latter are a genus of Agaricus (mushroom) which Hernquist found in some old mines and a new species of mites, Acari (genus Hydna) described by a Danish zoologist. Bäck was e.g. informed that Plantago *minor* is an excellent treatment for snake bites and further, outbreaks of glanders (caused by Burkholderia mallei) had been treated with acetic acid with fatal outcome. Also several plants such as Momordica elatarum and Cicuta gave no improvement. Hernquist, in despair, believes that there is no cure whatsoever for glanders. In the surgical faculty in Lyon Hernquist experienced "l'anus artificiele", i.e. a kind of colostomy made after a hernia with gangrenous intestinal changes. This stomy was held open in 4 years, but after treating the patient with a laxative the ingesta were pressed out the "normal" way and the intestine got totally congested. Hernquist also has thoughts on why mercury cannot heal "la gonorrhée" in Paris when it is possible in Germany: "equal diseases with equal visual circumstances cannot always be treated with the same drugs under different skies". Hernquist's "scientific news" in medicine were case studies and hearsays and were at this time generally accepted as "facts", although an awareness of controlled studies was beginning to crop up, e.g. the first "controlled" clinical trial on scurvy by James Lind in 1747.

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TRACKING SOCIALSTYRELSEN - A VISUAL TRIP OF THE LOCATIONS OF THE SWEDISH BOARD OF HEALTH AND WELFARE

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Socialstyrelsen, the National Board of Health and Welfare, traces its roots back to 1663, making it one the world's oldest healthcare authorities. This virtual presentation tracks Socialstyrelsen and its predecessors (Collegium Medicum, Sundhetskollegium, Medicinalstyrelsen) through its many locations in Stockholm.

Throughout the centuries, Socialstyrelsen has played different roles. For many years, it was mainly a professional organisation under royal protection with some supervising assignments. In 1763, it was established as a governmental office with duties also in the area of public health. In the 19^{th} and 20^{th}

centuries, its tasks gradually expanded to include, for example, inspections, appointments of doctors, management of hospitals and oversight of veterinary medicine. Since the early 1990s, several of its past commitments have been transferred to newly established governmental agencies, making Socialstyrelsen go back more to its former basics.

Socialstyrelsen's (and its predecessor's) various levels of recognition and esteem are reflected in its housings, ranging from the homes of doctors to palaces to not-so-remarkable office buildings. It happened that, during down periods, it was ousted because of failure to pay the rent, or it had to leave because the quarters were too heavily infested by vermin and parasites. In 1807, it got its first fit-to-the-purpose building.

Many of the locations have been of historical significance. Thus, Socialstyrelsen has been cohabitant with Russian prisoners of wars during the Charles XII reign (after the battle of Narva 1700), it has been located both in the palace where the royal family resided after the castle Tre Kronor burnt down and in the palace of the revolutionary government that led to the Bernadotte dynasty. The Karolinska Institute had its first location (1810) in the building of Socialstyrelsen's predecessor, and August Strindberg was born and raised in its building. The present setting is more unremarkable but of some architectural significance since it was, in the 1940s, the first official building in Stockholm to confront the functionalism.

During this visual tour, I will deliberate on possible relationships between, on one hand, the functions and recognition of Socialstyrelsen and its predecessors and, on the other hand, its settings.

AN EXTINCT SPECIES: TRADITIONAL MORPHOLOGY-, PHYLOGENY- AND GERMAN-ORIENTED RESEARCHER. A PERSONAL ACCOUNT.

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My medical research started in Uppsala in the mid-1960s with the histology of islets of Langerhans in snakes. We were in search of the function of an enigmatic cell type, A1, in the islets of Langerhans. A1 cells were relatively uncommon in humans. Were they more abundant in more primitive species? If so, could this give a clue about their function? At the time, there was ample phylogeny research in Sweden. Other morphologists explored pancreatic islets in turtles, frogs and primitive fishes; we studied snakes.

We found that the islets contained an abundance of A1 cells. In our scientific publication in 1966, we cited papers all the way back to 19th century. We devoted our article to the Italian histologist Vincenzo Diamare on his 95th birthday. He had published a comprehensive study on the comparative morphology of pancreatic islets already in 1899.

In the 1960s, we simply did not have scientific tools available to proceed to explore the enigma of A1 cell function. We could not foresee that, a decade later, immunohistochemistry would come along; it vitalised, even revolutionised, histology. The immunohistochemists found the A1 cells to contain somatostatin. In the 21st century, only one paper on the pancreatic islets of snakes has been published in the scientific literature.

At the time our paper was published, histology remained tainted by its German cultural heritage. We published our findings in Zeitschrift für Zellforschung und Mikroskopische Anatomie. In the mid-1960s, a journal with a majestic German name was still prestigious. The Zeitschrift had, however, started to adapt to the cultural shift in medical sciences and published articles not only in German but also in English.

By the mid-1960s, it appeared that histology was an academic discipline in a scientific cul-de-sac. My young supervisor's scientific interest soon changed from phylogeny to ontogeny and from German-

impregnated morphology to US-inspired function (and I followed him). My supervisor Claes Hellerström became an Uppsala frontrunner in the transition from traditional histology to the new discipline of cell biology. He stopped publishing in the Zeitschrift.

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THE VALUE OF POISON – THE UNDERSTANDING OF OPIUM AMONG SWEDISH PHARMACISTS 1870-1925

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Before the regulation of opium as a "narcotic" in Sweden in 1923, opium was not regulated for its intoxicating properties and was freely available. But not in any kind of shop. Opium was legally available only through the pharmacies. This thesis explores how this free availability of a narcotic was understood by its traders, the pharmacists.

The title of this thesis – The Value of Poison – indicates how opium could be conceptualized both as a safe, everyday remedy essential to keep freely available and as a drug of intoxication. As a poison it could be articulated as a matter of primarily pharmacological, not moral or medical, concern. This also gave the pharmacists, with their special knowledge of pharmaka (drugs, poisons), an autonomous space of knowledge free from the ever more intruding "medical gaze". But, in order to articulate this kind of understanding of opium, another kind of knowledge was needed to be acknowledged: that of the user. In this articulation a "sensus communis" was tied in with a broader cultural knowledge of drugs. Problems with opium were focused on the danger of acute poisoning, not recreational intoxication. Concepts that could have problematized this kind of use were rearticulated as problems either of illegitimate trade, unregulated markets and advertising or of draconian regulation by greedy or sloppy doctors. These rather opposite elements were made equivalent through the articulation of ignorance in both cases, thus further emphasizing the special knowledge of the pharmacist.

The thesis locates a process of contradiction that contributes to the eventual diminishing of the discourse of poison towards the end of the period. The pharmaceutical knowledge that guaranteed the discourse was based on a "pharmaceutical gaze" on pharmaka. It pierced through the drug to identify its constituent parts. In this process it was promised that the different effects of opium would be separated. "Narcotic" could be a by-product, to be discarded or controlled, without dispensing of other therapeutic effects. With this ever deeper knowledge of opium, knowledge in the pharmacies was made insufficient for the full understanding or opium, and so too was that of the traditional user. The era of opium as a poison was over.

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CENTRALIZED MEDICAL SERVICES IN ANCIENT ROME

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Current practice in planning and building of medical facilities, seems to be twofold; abandon existing building and move the hospitals away from previous locations; adding an enormous administration In ancient Rome, medical facilities were, from the start, localized to central areas of the cities. The administration of medical services was under divine and, at later stages, clerical administration, kept on few hands. The patrons of medicine were gods, heroes and saints.

The buildings used for the practice of medicine, were originally connected to temples, devoted to divine healers. With the introduction of Christianity, the pagan gods and heroes, were replaced by Christian healers.

It is worth noting that this transition went rather smooth and furthermore that the medical facilities remained in the area of the original buildings. When the Christian healers replaced the ancient ones, the new hospitals were simply built on top of the ancient ones. There was never a question of moving away from the original sites, devoted as they were, to divine healing.

The presentation addresses the continuous practice of medical practice in central Rome, focusing on the Isola Tiberina and the Forum Romanum.

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SEX AND PROCREATION IN PRE-CHRISTIAN MEDITERRANEAN CULTURES

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Sexuality and precreation is the condition sine qua non for the existence of humanity as it guarantees the continuation of mankind. The downside of procreation is that it, if not controlled, may lead to overpopulation. The knowledge of human genital anatomy and physiology was limited, and the whole process of procreation and fertility control was poorly understood. It took some time before vaginal intercourse was linked to subsequent pregnancy, and classical mythology contains several stories of pregnancies occurring in non-sexual contexts.

The moral codes and perception of sexuality, were very different from our more Victorian view. Ancient cultures considered a healthy and varied sexual life an important part of life, to be continued also after death. Nudity was not frowned upon; however unclothed men and women were depicted in different ways. The Christian idea that sex should be limited to the married state, did not apply to classical sexual behavior. Extramarital sex was widely practiced, as were sexual acts between members of the same sex, always practiced according to set rules.

This PowerPoint presentation gives an overview of sexual behavior and practice in ancient Egyptian, Greek and Roman cultures. It contains many illustrations of sexual acts and sexual behavior.

RABID FINLAND: HYDROPHOBIA IN FINLAND DURING THE 19th and EARLY 20th CENTURIES

Deckwirth V

Rabies is one of the most fearsome zoonoses in the world. Finland became disease free in the 20th century, with the last well-documented outbreak occurring in 1988-1989. However, published data on the early history of rabies in Finland is scarce. In this presentation, the history of rabies in Finland during the 19th and early 20th centuries is reviewed and new sources are presented. A description of the outbreaks in 1886, 1892-1893 and the early 20th century is given and the beginning of the preventive immunization activity in animals in Finland described. Both human and animal cases are discussed.

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MEDICINE AS AN ART OR A SCIENCE? IMPLICATIONS OF THE SCIENTIFICATION OF MEDICINE IN EDUCATION FROM THE TURN OF THE NINETEENTH CENTURY

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A major transformation in Western medicine took place around the middle of the nineteenth century. Gradually comprehensive medico-philosophical systems, such as Brownism and Broussaisism, which explained the vital functions by indisputable physico-chemical processes in the humours and firm parts of the body, had made place for treatment methods based on extensive medical research. Also the students had to be made familiar with this new approach through the introduction of practical courses in, for instance, microscopic pathological anatomy and in anatomy of the bronchial tubes. However, this modernisation process was clearly not welcomed by everyone. The scientification of medical education was not a straight-lined development, but rather an evolutionary process with many ups and downs. The increasingly dominant form of 'scientific' medical knowledge was often highly contested, coloured by the wish to return at least partly to the idea of medicine as an art.

The aim of this presentation is to study divergent views on a 'scientific' approach of medical education from the end of the nineteenth century. The discussions at the faculties of medicine in Belgium will form the starting point, but they will be put in a large international perspective. Indeed, their colleagues abroad were struggling with the same issues and, moreover, the protagonists at the time were continuously referring to German, French or English examples. How, for instance, a new balance could be found between on the one hand the practical training at the bedside in the increasingly specialized clinics, and on the other hand the theoretical-scientific training offered in the laboratories? According to their professors, what kind of attitude future physicians had to adopt in the discussion between the extremes of a specialized focus on the disease and disease causation, as opposed to a clear holistic approach, paying attention to the individual patient and his or her entire medical and psychological background? And to what extent there was still room for 'medical uncertainty' within the 'objective' science of medicine?

CAN RE-INTERPRETATION OF ARTEFACTS FROM ARCHAEOLOGICAL EXCAVATIONS IDENTIFY THE PHYSICIANS OF BYGONE DAYS?

Frölich, A

The poster is visualizing how re-interpretation of archaeological find-material identified a trepanation set among weapons, excavated from an Iron-Age offering bog. Besides this, re-interpretation also proved that sloe-thorns were used for wound closing, which the poster visualize in pictures.

Another re-interpretation of artefacts excavated from a Viking Age site produced two bloodlettingirons, originally interpreted as keys. Illustrations show the difference between keys and bloodlettingirons.

The last example is an interpretation problem, in fact a question, hopefully being discussed or solved by some of the congress participants.

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INFANT FEEDING METHODS AND CHANGES IN REGIONAL PATTERNS IN MORBIDITY AND MORTALITY IN ICELALND 1850 TO 1920

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During the pre-transitional era, there were notable regional variations in infant mortality levels (IMR) in Iceland. Whereas a few areas displayed levels that were low by European standards at the time, infant mortality in most places was comparatively high and notably higher than was generally the case in the Nordic countries. The main reason for IMR was the prevalent tradition of artificial feeding of infants. In some areas, especially rural areas in the southern and the western part of the country it was fairly common not to breastfeed at all. In other areas, newborns were breastfed but fairly soon cow milk or even solid food was introduced.

It has been shown that despite campaign favour of breastfeeding during the second part of the 19th century, infant feeding traditions changed slowly. At the beginning of the 20th century areas with weak breastfeeding tradition in earlier dates were still characterized by low breastfeeding ratio. Nevertheless, there was a convergence in IM-levels and by 1910 there were only marginal differences in infant mortality levels between areas. This study looks closer at the development of mortality and morbidity levels in areas with different feeding patterns in the beginning of the 20th century.

It is shown that even though there were marginal differences in IMR between areas there were notable differences in health of young children. In areas with a long-standing tradition of breastfeeding noted infant heath was generally good and the death of an infant "generally associated with premature birth and low birth weight", areas with a tradition of artificial feeding were marked a common occurrence of gastro-intestinal diseases among infants. It is also shown that even though regional differences in infant mortality levels were miniscule, individual level data indicates that there were still some differences in survival chances between breastfed and artificially fed infants as late as 1920. Compared to earlier periods, however, the differences were small. With hygienic measures, knowledge about contagion and better treatment of food given to babies it was possible to reduce levels of infant mortality among artificially fed babies to comparatively low levels.

OLD DISEASES, CURRENT MEDICAL PROBLEMS: THE CASE OF COCOLIZTLI IN NEW SPAIN IN 1545-1548

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From 1545 to 1548, an epidemic of an unknown disease, characterized by profuse bleeding, affected the indigenous population of New Spain. The native physicians who were called upon to diagnose the disease and treat the patients named it Cocoliztli, a nahuatl word meaning "disease, illness or epidemic". Even though the disease was well known to native physicians at the time, Spanish doctors failed to incorporate it into their own body of knowledge, resulting in very little information about the disease today.

Currently, historians of medicine are trying to reinterpret Cocoliztli through the application of retrospective diagnosis. Nevertheless, the efforts have not produced results because researchers continue to ignore the theoretical framework used by indigenous practitioners to construct Cocoliztli as a disease entity.

The paper intends to present the sociocultural construction of Cocoliztli made by indigenous physicians during the outbreak of 1545. Through the application of rhetoric and semiotic analysis to written and pictographic documents produced in New Spain during the 16th and 17th centuries, we are able to recreate the native physicians conception of the disease in its original time and space.

Key words: Cocoliztli, New Spain, sociocultural construction, rhetoric and semiotic analysis, ancient disease.

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AN UNRECOGNIZED PIONEER? THE ORTHOPEDIC SURGEON THEMISTOCLES GLUCK (1853-1942) AND THE NOBEL PRIZE

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Total knee and hip replacements are among the most frequent operations carried out worldwide within inpatient surgery. A recent review in *The Lancet* labeled the total hip replacement "the operation of the century". Many scholars agree that the early history of joint replacement is connected with the biography of Themistocles Gluck, referring to his use of ivory, gold, and platin prosthesis to replace tuberculous femoral heads in the last decade of the 19th century, as well as his efforts to implant artificial wrists, shoulders and knees. It has been argued that Gluck completed the first endoprosthetic replacement.

Gluck's reception history uncovers some mechanisms of scientific reputation in the field of orthopedic and general surgery during the last hundred years. In 1925, the journal *Medical Life* even portrayed him as a "pathfinder in almost all fields of surgery, who had the most colorful career of any surgeon, both past or present". However, even if he gained an immense recognition later in his career, his earlier work was strongly discredited. A common narrative

in the historiography suggests that his ideas were ridiculed by contemporary authorities in Germany.

This paper will reconstruct Gluck's diverse scientific reputation over the last century with a particular focus on Gluck's candidacy for the Nobel Prize in physiology or medicine in 1933. The comprehensive Nobel Prize nominations underline Gluck's visionary work on joint replacements using ivory prostheses in 1890. It caught the eye of the Nobel committee, which ordered two evaluations of Gluck. Besides the files collected at the Nobel Archive in Sweden, the paper is based on Gluck's scientific publications and his autobiography, as well as a critical review of some ergo-biographical sketches. We will show why Gluck in fact was a prime candidate for the coveted trophy, and provide a first exploratory account of the history of orthopedics and the Nobel Prize. Such Nobel Prize candidacies offer a new perspective to explore and better understand aspects of credit and scientific priority issues in the history of medicine in the 20th century.

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THE DEVELOPMENT OF MODERN PHARMACOLOGY IN DORPAT (TARTU) AND STRASSBURG UNDER THE INFLUENCE OF RUDOLF BUCHHEIM AND OSWALD SCHMIEDEBERG

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King Gustav II Adolf, on advice of Chancellor Johan Skytte, signed on June 30th, 1632 the act to establish the second Swedish university in Dorpat. Owing to political turbulence in the region the university was moved to Pärnu at the end of the century and thereafter ceased to function. Reopening of the university occurred in 1802 and for ninety years it developed at remarkable speed by attracting substantial financial support and, at least for a period in their carriers, many exceptional minds. The innovative academia in Tartu became the venue for transformation of the obsolete materia medica to modern pharmacology.

Rudolf Buchheim (1820-1879) earned doctorate in 1845 at the University of Leipzig. While a medical student he translated the *Elements of Materia Medica* by Jonathan Pereira into German, editing it substantially and adding his own chapter *Art der Wirkung*. This work attracted the interest of the medical faculty at Tartu. The university was operating in German, and the university was a hub of the influential Baltic German culture, whereas half of the professors were coming from Germany. Buchheim assumed responsibility of teaching the subject in Tartu in 1847 and became full professor of pharmacology and toxicology in 1849. He capitalized on the local high level of analytical chemistry and physiology in launching his quest to characterize the fate of all ingredients of the contemporary materia medica in tissues, and their action, or the absence of it, on bodily functions. Hence he built foundation to all

modern pharmacokinetics and pharmacodynamics, summarized in his *Lehrbuch die Arzneimittellehre*.

His pupils were many but one clearly stands out. Oswald Schmiedeberg (1838-1921) earned his doctorate in 1866 with a dissertation concerning the measurement of chloroform in blood. He took over the responsibilities of his teacher in 1867 when Buchheim moved to Giessen. After the Franco-Prussian war Schmiedeberg became professor of pharmacology in Strasbourg in 1872 where he remained for almost fifty years. Schmiedeberg has been referred to as the "father of pharmacology" owing to the large number of his pupils and their pivotal role in the rapid development of pharmacology during the following decades.

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THE ERRATIC MEDICAL KNOWLEDGE ACCUMULATION; DIFFERENTIAL INFANT DIAGNOSIS, THE SHAKEN BABY SYNDROME AND EVIDENCE BASED MADICINE

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Sweden has a long history of focusing on children's health with the Child Health Centers in the 1940s, the Child Accident Prevention Committee in the 1950s, prohibiting corporal punishment and emotional humiliation in 1979 and the formation of the Children's Ombudsman in 1993. Since the 1970s, Sweden has developed a child protection system to prevent and act against child abuse. This system is conveyed through health, social and judiciary sectors and civil society.

A hypothesis of violent shaking causing subdural hemorrhage by the British neurosurgeon Guthkelch and developed by Caffey into the battered child syndrome in the 1970s. This was later coined as the shaken baby syndrome (SBS) comprising the triad subdural hemorrhage, retinal hemorrhage and brain contusion. In early 2000 SBS was re-defined as abusive head trauma (AHT), also comprising fractures, symptomatic or non-symptomatic. The SBS/AHT has been increasingly introduced in Sweden during the last decade to diagnose infant abuse. For the diagnosis SBS/AHT it has been stated "... almost 50 years of scientific medical supportive literature, the diagnosis of abuse is being made with increasing certainty." (Slovis et al 2012). However, the scientific solidity of SBS/AHT has been challenged during the last decades by prominent scholars, among them Guthkelch, because of its alleged pathophysiology, circular reasoning and oversight of differential diagnoses. The systematic literature review on SBS/AHT by Swedish Agency for Health Technology Assessment and Assessment of Social Services (SBU), the first ever conducted, concludes in 2016 that there is limited scientific evidence to explain the triad by isolated shaking, and insufficient evidence to assess the diagnostic accuracy of the triad to identify SBS/AHT, irrespective of presumed mechanism of injury.

The epistemology of Ludwig Fleck will be applied to discuss how the hypothesis of SBS/AHT rose into a scientific theory, the ethical and judiciary consequences of its implementation into health care purportedly for protection of the infants. The combination of evidence based medicine, revisiting old clinical knowledge of differential diagnoses, as neurosurgical infant conditions and skeletal fragility, and modern diagnostic techniques are generating new knowledge and now replacing the SBS/AHT-paradigm. This is an example showing the erratic accumulation of medical knowledge.

SÄTRA BRUNN – A MINERAL SPRING AND A REHABILITATION CENTRE

Höglund N J M D h c, Uppsala University and Sätra brunn, Sweden

In June 1700 Samuel Skragge, medical officer of Västmanland and Dalarna, examined the renowned offer spring in Kijla parish. After studying in Bath, England, and then at Medevi brunn he had a good knowledge of humoral pathology and practice. After analysing the water Skragge bought a vast part of the surrounding land. Next summer he announced in the papers offering treatment at the new spa.

Within a few years Skragge had built a hydropathic establishment. He prescribed drinking water concurrently with walking and cold and hot baths. In letters and papers he described miraculous cures. After five years Skragge was appointed personal physician to the Swedish King Karl XII. He took part in the Russian campaign, experienced the defeat at Poltava and the retreat to Bender, Turkey. He died 1716 on his journey back to Sweden. The activity at home continued but not so powerfully and the enterprise got into bankruptcy. At this moment the bishop in Västerås, Anders Kalsenius, bought the estate and then 1747 donated it to the University of Uppsala to serve as a health resort and a practice for medical students.

Since then up to 1998 Sätra brunn was a summer hospital led by the professor of Medicine and/or an attendant. It was developed into a rehabilitation centre especially for rheumatics and stroke patients.

The treatment contained

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- Medical baths (hot clay packings followed by a warm bath mixed with pine needle extracts relieving stiff joints and muscles before further treatment
- Physiotherapy, individually and in special groups
- Occupational therapy to train activities of daily life and testing technical aids

From May to September 1 300 patients, 325 a month, all referred from the regional county councils, were accommodated and got an individual rehabilitation programme.

The staff consisted of 3-4 physicians, 6 nurses, 2 laboratory assistants,

20 physiotherapists and 20 occupational therapists and assistants. Patients and all personnel lived in the old-fashioned but modernized buildings in the extended park and took part in the social and cultural life.

The last week of the summer seasons Sätra brunn hosted 30 postgraduate students coming from the Nordic and Baltic countries.

UNKNOWN MEDICAL RECORDS FOR OFFICERS IN THE FINNISH WAR IN 1808-1809 DETECTED IN THE ARCHIVES OF THE HAGSTRÖMER LIBRARY, STOCKHOLM

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At the end of August, 1808, a military hospital was organized in Umea, Sweden, in order to admit wounded and sick patients from the retiring Swedish army in Finland. The experienced

military doctor Johan Fåhrée was appointed chief over Umea Hospital, the biggest hospital during the Finnish war in 1808-1809. From September to December 1808, about 3 800 soldiers arrived in Umeå, a town of about 1 000 inhabitants. Poor houses, lack of food, epidemic diseases and winter cold caused a very high mortality, about 30 percent during the fall and over 50 percent during the winter term. Medical records from the soldiers, who were cared for in Röbäck, describe the frightful pain they had to suffer. Other medical recordings from Umea hospital have been regarded as lost.

Olle Rudolphi, a medical doctor and local historian, asked the Hagströmer Library in Stockholm for any medical documents from Umea Hospital. The librarian Gertie Johansson found 93 until then unknown medical records for officers from September 1808 to January 1809. These records are partly written in Latin. They have now been translated by professor Anne-Marie Billing-Ottosson.

Many of these officers are mentioned of in J.L. Runeberg's poems about the Finnish war, *Fänrik Ståls sägner (The Tales of Ensign Stål, 1848-1860)*

The class difference between the ordinary soldiers and the officers is obvious, both as to housing, food and other equipment, and as to survival. No mortality is recorded for the officers. Doctor Fåhrée's document includes not only medical diagnoses but also his complaints about the coward and immoral military men alternating with his admiration for the brave and honorable officers. Examples of both will be presented at the congress.

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MIDWIVES EDUCATED IN COPENHAGEN 1739 - 1920

Juhl, M. Retired orthopedic surgeon, lic.med., Viborg, Denmark

The records of the examinations at the school of midwives in Copenhagen have been transcribed primarily for genealogical purposes, and here the contents of interest for medical history will be presented.

A total of 4.630 persons passed the examination during the years. In the beginning more than two thirds came from Copenhagen, and later the number dropped to about 10 per cent.

Only one of the 4.630 was a man, who passed the examination in 1756.

Some women from Greenland and Danish Vestindia had problems with the Danish language and got a modified certification.

Degrees were given from 1844, and from 1844 prizes were given to a few of the women. The prize was from 1867 named after professor Levy, who was one of the 45 examinators.

In some cases more informations can be found about the examined. E.g. a women who had not been educated at the school but had studied the book written by Berthel Wichmand (1755 and 1771), and a woman who was sent to jail after having falsified her degree from second to first degree, and before the education and examination having bend sent to jail for having been involved in obscenity.

Informations from the analyses can be found in Danish in <u>www.viborgslaegt.dk</u> under medlemssider and my name.

DANISH SOCIETY FOR THE HISTORY OF MEDICINE: 100 YEARS OF SERVICE (1917-2017)

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In 1874, Julius Petersen (1840-1912), who was a general practitioner, began to give lectures about the History of Medicine at the University of Copenhagen, and in 1876 he released the book *Hovedmomenter i den medicinske Lægekunsts historiske Udvikling*. This book and Petersen's later works portrayed the interplay between leading figures and ideas in Danish and European medicine, especially from the 16th into the 19th century. The book was translated into German.

In 1893, he became the very first Professor in the History of Medicine at the University of Copenhagen. Petersen expressed the hope that his writings on the History of Medicine would help ordinary doctors to distinguish between serious, although often fruitless search for improvement in the (clinical) practice of medicine, and on the other hand, ephemeral or fraudulent blind alleys. At his 70 years birthday eight of his disciples composed a Festschrift.

In 1907, at the occasion of the 50 years anniversary of the Danish Medical Union, an exhibition of medical artefacts was arranged. Carl Julius Salomonsen, Denmark's first bacteriologist, and two of Julius Petersen's disciples were the promoters. They asked members of the medical and related professions to donate artefacts. After the exhibition, the objects were stored in Salomonsen's Institute of Bacteriology. This was the beginning of the Medical History Museum of the University of Copenhagen (now: *Medical Museion*), which after many troubles got its present domicile in the old Academy of Surgery in 1946.

In 1917 an interdisciplinary circle including some of Julius Petersen's disciples founded *The Danish Society for the History of Medicine* (DMHS) with Professor Carl Julius Salomonsen as Chairman. The aim of the society was to promote research and education in the History of Medicine, and to disseminate knowledge about such. This poster will highlight a selected few activities in the Danish Society for the History of Medicine's 100 Years of Service from 1917 to 2017 and provide a historical overview.

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FROM SOCIAL CONTROL TO COMBATING INFECTIOUS DISEASES:

THE ORIGINS OF THE SCHOOL MEDICAL SERVICE IN COPENHAGEN

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Danish historians who have studied the early twentieth-century development of the school medical service in Copenhagen have critically claimed that the predominant focus of the initiative was social control. It is suggested that this corresponds with the changing scope from environmental sanitation to the emergence of personal hygiene, around the turn of the century. This article offers a new dimension to the discussion, through an appraisal of political discussions and school medical service reports in Copenhagen, as revealed in its City

Archive. The article concludes that the school medical service established in Copenhagen around 1900 was not merely a socially controlling institution, but was an embedded practice in a medical network with two main objectives: a) to screen every child before starting school to prophylactically exclude non-robust individuals for the sake of societal and national efficiency, and b) to detect diseases, especially tuberculosis, to prevent and actively combat contamination.

NORDIC DECAY: TRACING SCANDINAVIAN DEGENERATION THEORIES, 1880-1922.

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This paper builds on my PhD thesis, 'Nordic Decay: The reception and application of degeneration theory and the concept of atavism in Scandinavian eugenics, criminal anthropology, medicine, and cultural debate, 1880-1922', funded by the Wellcome Trust and supervised by Prof. Joanna Bourke (Birkbeck) and Associate Prof. Torbjörn Gustafsson Chorell (Uppsala University).

During the late nineteenth century, degeneration emerged as the spectre haunting European evolutionary discourse, eventually permeating Scandinavian medical debates concerning perceived racial deterioration, mental illnesses, and criminality. While British and continental degeneration theories have been thoroughly explicated during the past years, little scholarly attention has been given to the influences and transnational exchanges of degenerationist thought between Scandinavia and the rest of Europe during the late nineteenth- and early twentieth century. By examining Scandinavian degenerationist works, each shaped by their national discursive context and their function as a national response to this 'European disorder', this paper will elucidate the unique multinational specificity of Scandinavian conceptions of degeneration theory. I will especially stress the importance of degeneration theory to Scandinavian racial sciences, culminating in the founding of the Swedish National Institute of Eugenics in 1922. The same year, the director of the institute, Herman Lundborg, published the booklet The Danger of Degeneration, arguing that the national 'inner enemy' was to be found in the degeneration - defined as 'hereditary inferiority causing racial deterioration' - of the Swedish race. Lundborg cites emigration of good racial stock and immigration of 'unwanted' individuals as both symptoms and causes of degeneration; this conception of excessive emigration as a degeneration phenomenon is unique to Scandinavia, as an unprecedented number of Scandinavian people emigrated to America during the turn of the century. Another persistent national trait of Scandinavian degeneration theory was its firm emphasis on the primacy of heredity over environment, eschewing environmental explanations in favour of interpreting degeneration in terms of racial pollution and deterioration. In outlining some of the unique characteristics of Scandinavian degeneration theories, this paper will argue that, rather than merely reiterating French, German, British, or Italian degenerationist theories, Scandinavian medical scholars actively contributed to the European research field on degeneration.

THE EARLY PHYSICIAN SYSTEM IN FINLAND 1750 - 1850: GOALS AND CHALLENGES

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The Finnish state health care started to slowly develop in the 18th century with the lead of motherland Sweden. The first district physician was appointed in 1749, but there were still only 13 physicians in 1809 when Finland was annexed by Russia. The system encountered many challenges during the 18th and 19th century. The aim to offer a solution to lethal epidemics proved hard to accomplish, as the physician offices were filled slowly and one physician usually had a huge district as his responsibility area. Another problem was that the common people were reluctant to turn towards advocates of medicine in cases of sickness or injury.

In my presentation I will discuss the goals of the stately health care and the challenges it encountered during c. 1750 - 1850. I will combine three perspectives: the stately plans and regulations, the implementation in practice, and the role the physicians themselves had in this development. Even though there was a growing concern for the diminishing population early on, both the implementation of health care and the results that followed were insufficient for reducing death rate. I will discuss the main reasons for this with emphasis on what the physicians wrote about the practical challenges of their work in their journals. Additionally, I will provide an overview of the physician network and how it changed the accessibility and efficiency of the health care.

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EARLY DEVELOPMENT OF PEDIATRIC ONCOLOGY IN SWEDEN

Anders Kreuger Uppsala, Göran Gustafsson Stockholm, Gunilla Berglund Göteborg, Lars Åhström Stockholm, Stanislaw Garwicz Lund.

This paper describes the very rapid development of pediatric oncology during the 1970-ies in Sweden when diagnostics, treatment and patient care were organized to be equally functioning for all the 44 pediatric units in the country. The formation of **SBLG** (Swedish childhood leukemia group) and **VSTB** (Working group for solid tumors in children) proved to be very important. Through their university hospitals all regions of Sweden were represented. These working groups managed to produce guidelines for the work-up, treatment and follow-up of many of the pediatric oncological diseases. Since 1973 there has been an established and nationally complete registry of incidence and treatment results of childhood leukemia in Sweden. Today diagnostics and intensive cancer treatment are centralized to 6 centers for childhood cancer. Since 1982 there is also a close cooperation between the five Nordic countries (Denmark, Finland, Iceland, Norway, Sweden) in **NOPHO** (Nordic Society of Pediatric Hematology and Oncology) concerning all aspects of childhood cancer.

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CALL THE MIDWIFE - A TRUE STORY OF BURTRÄSK RURAL DISTRICT IN THE 1900s

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Matilda Forsberg was born in 1881 as the ninth of 17 children in a farmer family outside Umeå in the county of Västerbotten, Sweden. She studied at the General Maternity Hospital in Stockholm to become a midwife in 1915 and worked in Burträsk for 30 years from 1916 to 1946. She had no own family. Matilda died 77 years old in 1968.

From 1881 Swedish midwives were obliged to keep a diary of their work. Matilda Forsberg's diaries reveal that she was on duty 24 hours a day and delivered 2106 live born children, 1141 of them in the mother's home the rest in the small local cottage hospital. The procedure for calling the midwife varied. Often a neighbor had to travel and leave a message. In 1937 Matilda got a telephone subscription but most families did not have a phone. However in a small village like Burträsk, it was probably commonly known when a woman was close to labor. Antenatal care by midwife was not introduced until gradually after 1938.

In 20 percent of the cases, the midwife had to travel more than 10 km, in some cases more than 35 km. For nearby cases, Matilda probably walked or used a bicycle, but to reach mothers living further away the midwife - with her bag - was likely picked up by horse and wagon or a sledge. Most roads were small and sometimes in bad condition. Motorcycles and cars were rare.

Some families were poor and many had several children. Besides normal pregnancies and deliveries midwife Matilda herself had to handle e.g. twins, abnormal fetal presentation, placental problems, hemorrhages, infections, eclampsia and miscarriages. In emergency cases, she could use a forceps or perhaps call the district medical officer, and in a few cases he was able to come.

The perinatal mortality was 26 per 1000 live born. Two of the mothers Matilda cared for died close to the delivery i.e. 95 per 100 000 live born. Compared to corresponding figures in 2015 (0.24 per 1000 respective 4 per 100 000 live born) the differences are very high but given the level of knowledge and the available resources 100 years ago, midwife Matilda and her colleagues performed an enormous quantitative and qualitative work.

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AT HOME WITH PEOPLE WITH SEVERE AND LONG TERM MENTAL ILLNESS

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New understandings of mental health open up new ways of investigating it—including for researchers outside the healthcare profession. Access to voices from *inside* the illness experience, out in public, is greater now than ever before. This is an interesting opportunity for cultural institutions like museums. A museum, too, can treat mental illness. Not with diagnosis, therapy, and medication for the individual patient, and not in a hospital. But as an open and accessible venue where different beliefs and practices can be lifted up and added to the public dialogue about mental health and about the understandings and treatment options available in the field.

To contribute to this dialogue has been a goal of the National Medical Museum in this documenting an exhibition project. We have wanted to collect and exhibit stories that give new insights and understandings about how it is to live with serious mental illness in today's Norway.

People no longer live their lives in big institutions clearly separated from the rest of society. The borders between being healthy and sick and hospitalized or not, are at times difficult to determine. Treating serious mental illness continues at closed institutions, but also a number of other places. People with serious and long-term mental illness often live other places; at their parents, in their own apartments, in houses, in public housing projects, flat sharing with others. How are they doing there?

The museum has visited nine homes, interviewed the people living there and taken pictures of their rooms. The stories are presented at the exhibition *At home with people with severe and long term mental illness*. It opened in October 2016, and will be on until august 2017. In this paper, I will present the project closer and open a discussion on methodology, results and further use of the exhibition

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CHANGES IN THE LATVIAN PHAMACEUTICAL SECTOR DUE TO THE OCCUPATION BY THE NAZI GERMANY (1941-1945)

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Latvia's first period of independence lasted from 1918 to 1940. In June 17, 1940 territory of Latvia was invaded by the Red Army. After one year territory of Latvia came into power of Nazi Germany. During Soviet occupation the private pharmacies were nationalized, medicine stocks were mismanaged and part of employees deported to Siberia. Several problems started to emerge such as lack of staff and medicines.

During the Nazi Germany occupation, the laws and procedures was partially restored as it was in the time of independent Latvia. The former Pharmaceutical Administration resumed it's actions. About the Pharmaceutical Administration fiduciary person was re-employed Latvian pharmacist Aleksandrs Dzirne (1907-2001).

One of the first tasks was to identify stocks of existing medicaments. Already in 1941 there was a need to developed strict distribution of medicaments. The medicine purchase from abroad was restored in small amounts. The following years wholesalers were allowed to issue for pharmacies only the minimum number or minimum treatment dose of the medicaments.

Particularly acute was returning process of the nationalized pharmacies to their former owners or re-privatization. The re-privatization of pharmacies began on 12 June, 1943, when the General Commissariat issued regulations about the public pharmacy concession. Until 2 May, 1944 was returned 220 pharmacies and continued work as the private enterprises.

The Pharmaceutical administration also had to deal with the pharmaceutical staff issue. In 1941 first half was employed 1741 person in pharmacy sector, of which 543 were of Jewish origin. Latvian pharmacy due to the Jew holocaust lost about a third part of the employees. The sector was also threatened by the mobilization. In 1943 A.Dzirne asked to release 52 pharmacists from the mobilization into the Legion, justified this by the fact that the normal operation of the pharmacies would take at least another 600-700 employees.

During the Nazi Germany occupation Latvian pharmaceutical sector was struggling with the consequences of the Soviet occupation. There was also experienced the huge challenges as shortages of medications and staff. Despite of the war conditions, pharmacies performed their

duties. Former pharmacy owners were given an opportunity to regain their private pharmacies.

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BLOOD, BONE, AND DNA AT THE NORWEGIAN MUSEUM OF SCIENCE AND TECHNOLOGY

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Drawing on the development process of the exhibit Blood, Bone, and DNA scheduled to open in 2018 at the Norwegian Museum of Science and Technology, this paper will discuss historical and contemporary research on human biological variation and its intersections with understandings of identity and health. The starting point for both past and present narratives are the collections that medical doctors and anthropologists created in the interwar period. The focus is on the diverse practices of measuring, classifying, visualizing, mapping, standardizing, and (e)valuating to reveal how human similarity and difference are produced through the multiple entanglements between science and medicine, technology, culture, politics, and economy. In the center of these practices have always been objects with profound cultural significance. Human remains, especially skulls, blood, and more recently DNA, are invested with meaning and associated with the most fundamental aspects of the human condition. As these objects oscillate between the readily available and tangible to the invisible or even mysticized, the products of such research have equally varied from visually compelling artistic ethnographic representations to disturbing racial type photos, and from world maps to obscure statistical data sets and diagrams. Instruments as commonplace as measuring tapes to high-tech DNA sequencers substantiate difference and attest to the varying demands in expertise, tacit knowledge, skill, or detached technical reproduction. This coexistence and juxtaposition of objects and practices in the museum space, and the diverse interactions with the Museum's audience facilitate the exploration of the social and cultural embeddedness of science and medicine. Finally, the discussion of the exhibition development process will demonstrate how the museum space becomes an important site for exploring the possibilities and limitations of history and philosophy of science and medicine in practice.

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NÜRNBERGER MEDICINAL WEIGHTS DISCLOSED IN THE WRECK OF THE 17TH CENTURY SWEDISH MAN-OF-WAR HMS KRONAN

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On June 16 1676 the Swedish Navy was hit by one of its greatest disasters ever when its man o'-war the royal ship *Kronan* ('The Royal Crown') perished into the Baltic Sea in an explosion off the east coast of Öland, while engaged in a battle against an allied Danish-Dutch fleet. The discovery of the wreck in 1980 at a depth of 26 m, marked the start of a marine-archaeological project that to date has produced about 35000 objects. A closed find like this constitutes a peep-hole straight into a number of aspects of late-17th century society. Among the plethora of objects, a pharmaceutical-medicinal context has over the years been established for quite an extensive area of the wreck-site, and to date it makes up to about 200 entries, according to the actual excavation log.¹ This presentation actualizes the identification of four medicinal weights which over a span of thirteen years have been recovered from the

wreck-site as isolated finds. The subjects have now been fully characterized with respect to the type and seizes of weight and they have been traced to their production site, manufacturer, and time slot for production. The weight system, represented by the actual weights, which was used by the apothecaries in the composition of medicinal drugs on the European continent, was introduced in Sweden in 1668. The system was in operation until 1869 when it was abandoned due to a new Royal Ordinance. The recovered weights are as far is known the oldest ones of its type, hitherto to be known in Sweden. Like most of the finds at the wrecksite of *the Kronan*, they exemplify the relations between archaeologically retrieved objects and Swedish culture in wider contexts. In the actual case the influx of goods, knowledge as well as skilled individuals from Central Europe, reflecting a shift in the medical paradigm around 1650 as well as pharmaco-technical procedures.

 Lindeke B, Ohlson, B, (in press) With the warship *Kronan* in the wake of Paracelsus-Archaeological finds reflecting the conception of drugs in 17th century Sweden in *Transfer between sea and land. Maritime Vessels for cultural exchange in Early Modern Period.* Kahlow, S (ed.) Sidestone Press, Leiden.

PICTURE CONTROL: CYTOMETRICS, SCIENTIFIC FRIENDSHIP, AND THE ZEISS "UNIVERSALMICROSPEKTROPRAPH I", 1948-1966

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In 1948 Torbjörn Caspersson of the Karolinska Institutet turned to his particular friend and colleague Jack Schulz in Philadelphia, to make him an offer of parallel-building a piece of scientific equipment, an apparatus, referred to as his "Universal Microspectrograph". The two men had worked intimately on the role of nucleic acid in cell-division in Stockholm up to the outbreak of the war in Europe in 1939, never to be resumed. For Caspersson the apparatus project was a token of friendship, into which he poured considerably more than mere scientific ambition.

The ultramicrospectrograph was the culmination of the aspirations of Caspersson. It has been called his folly, a White Elephant, and referenced as a failure. This stigma adheres in particular to the commercial variant of the instrument, produced by the Carl Zeiss Ag.. Germany, in the late 1950's. The Zeiss archives however provide a rather more balanced picture. At that time it was the largest development project undertaken by Zeiss newly created "Mikrolabor". It was an unusually large, complex and expensive instrument. It also turns out to have been a runaway commercial success.

The history of the KI-Zeiss collaboration raises questions about tropes like "failure" and "prehistory" in the historiography of modern molecular genetics. The publication of the DNA-structure squarely relegated Caspersson's and Shultz' pre-war work on the role of nucleic acid in mitosis to "prehistory". Concurrently the "Universalmicrospektrograph I" went to the proverbial "dustbin of history" in the late 1960's by the introduction of flow-cytometry bench-top machines. Reopening their cases however allows an understanding of the local or national modalities involved in the development of modern molecular genetics or tumour biology someplace that was <u>not</u> involved in the "master-narrative" of the discovery of "the doube helix" etc. These are the more numerous venues of the modern research landscape after all.

REASSEMBLING OSLO'S LOST COLLECTION OF SURGICAL INSTRUMENTS

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From 1827 until about 1910, the first and only medical school in Norway, based at the University of Oslo, spent substantial time and money assembling a surgical instrument collection representing contemporary medical techniques and technologies from around Europe. During and after the First World War, however, this collection fell into neglect. In the 1960s several dozen boxes of dusty and broken surgical instruments were transferred to Norway's Folkemuseum in Oslo, where they were intended to serve as the core of a national medical museum. This never took place, however, and only two history of medicine articles ever emerged from the collection. The relocation of the medical school in the 1980s, and of the National Hospital in the 1990s, led to a further dispersal of the collections. For the last decade, most of the objects have been in the care of the National medical museum at Norsk Teknisk Museum, safely stored but without inventory numbers or provenance. In 2014, however, a curator at the university who was researching the small portion of the collection still kept there uncovered two original catalogues, dating from 1827 and 1910. The recovery of these book-format catalogues prompted us to ask how, and in what sense, the "lost" collection could be reassembled, and what might be gained by doing so. Such basic philosophical questions also raise a variety of basic practical questions such as what type of numbering and naming schemes should be used, and what sort of categorization system. Furthermore, what kind of explicit and implicit changes accompany the transition from a 19th-century paper catalog to a visually rich, smartphone-optimized search engine (DigitaltMuseum, administered by Norway's KulturIT, operating on a Primus back-end)? What kind of new insights may emerge from approaching an antiquated collection using new museological tools? Finally, we at the Teknisk Museum are curious to hear whether similar collections exist in other Nordic museums, what states they are in, and whether research has been undertaken on them.

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18TH CENTURY POPULATION RECORDS AS SOURCE MATERIAL FOR MEDICAL HISTORY: PROBLEMS, POSSIBILITIES AND SPECIAL CONSIDERATIONS

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Swedish population records, particularly after the formation of Tabellverket in 1749, offer excellent material for several fields of history, including the history of medicine, epidemics and demographics. Parish records of deaths and burials in particular give detailed insights into the diseases and causes of death faced by local populations. Despite such advantages, these materials have been afforded limited interest especially by practitioners of Finnish medical history. The explanation likely traces down to the challenging nature of the material as well as the interdisciplinary requirements of the field. The purpose of this presentation is to suggest solutions to typical methodological pitfalls whilst shedding light on the many possibilities offered by these records. I am currently writing my doctoral thesis on the prevalence of plague, smallpox and typhus in 18th century Finland as well as the efforts made to combat

these diseases as they link to the larger developments occurring in the Swedish medical thought of the era. During this process I have encountered many of the usual challenges presented by this type of research; diseases often bear several, interchangeable names and, due to the lack of adequate technology, the diagnoses tend to be based solely on the symptoms visible to the physician. Certain diseases are easier to recognize from the source material than others; smallpox, for example, was unlikely to be confused with anything else. On the other hand, febrile diseases, highly common causes of death among adults, present a much greater challenge from the point of view of research. 18th century medical literature lists a multitude of different fevers; to the modern reader, however, the descriptions seem to refer to a far smaller group of diseases or symptoms. Through a hands-on approach I hope to illustrate the presence of different diseases in this source material and to bring about much needed discussion about the role of population records in the study of medical history.

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CARING FOR THE PEOPLE: THE ESTABLISHMENT OF DISPENSARIES IN SWEDEN

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The last part of the 19th century and the early part of the 20th was the period of time when tuberculosis became the disease of the moment throughout Europe and the Americas. The disease had reached epidemic proportions, and it is estimated that in the cities of Europe nearly the entire population was infected. Such an estimate has also been made for Sweden. Although latent within many, the disease had reached epidemic proportions and probably reached its apogee in Sweden in the 1870's. It was not always easy to identify the disease before Kock's discovery of the pathogen, which made it possible to diagnose not only lung tuberculosis, but even its non-pulmonary forms. The struggle against the disease gained momentum throughout Europe and involved not only national governments, but philanthropists as well. The royal houses of Europe were often involved, as was the case in Sweden with the dedication of King Oscar's Jubilee Foundation to the cause. Although this fund was initially devoted to the establishment of sanatoria for the treatment of pulmonary tuberculosis throughout the country, it opened the door to other actions, one of which was the establishment of dispensaries devoted especially to tuberculosis and its prevention. What was the rationale behind the establishment of these bureaus, and what did they do during the first years of their existence?

This paper explores the dispensary movement within the country and illustrates the early work with the case of the textile city of Norrköping, which was not only one of Sweden's largest, but also one of the most deadly cities, as far as tuberculosis was concerned. The sources include the early legislation and the studies made in the preparation of this legislation on the national level, the local health board and its records, the work of various philanthropic organizations and, of course, the records of the dispensaries themselves. The role of the National Association for the Struggle against Tuberculosis within this context is also explored.

MEDICAL EDUCATION AT STETTIN'S ROYAL GYMNASIUM IN THE TIMES OF SWEDISH POMERANIA, 1647 - 1713

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In the aftermath of the Thirty Years' War (1618-48) the Duchy of Pomerania, practically ruled by the Swedish Crown since the 1630 Treaty of Stettin, and deprived of its own dynasty after the death of Bogislav XIV in 1637, was partitioned between Brandenburg and Sweden. Stettin became a part of Swedish Pomerania. This resulted, among others, in an important change in the curriculum of Stettin's Duchal Paedagogium, since 1667 known as the Royal Gymnasium: medicine was introduced to the programs of lectures. In the times of Swedish administration of Stettin, four physicians occupied the chair of medicine at the Gymnasium: Georg Kirstenius (1647-60); Johann Zander (1667-95); Christian Lembke (1695-1704); and Carl Friedrich Luther (1705-11). This paper is aimed at: explaining how and why medicine was introduced to the Gymnasium's teaching program, and what elements of medicine were taught in Stettin; highlighting the biographies of the four professors listed above, with the stress on their scientific background and connections; presenting the efforts made by Kirstenius, Zander, Lembke and Luther to provide their students with access to the possibly best resources for medical studies (e.g., the botanical garden designed, organized and financed by Johann Zander); discussing the role the professors played in the transmission of new concepts from Europe's leading medical research centers to Stettin and Pomerania (e.g., Kirstenius' introduction of Harvey's arguments for blood circulation); and the professors' original contributions to natural history and medicine, including Kirstenius' cross-studies in linguistics, botany and pharmacy, and works by Lembke and Luther on the chemical composition of Pomerania's mineral waters

HOW WAS MEDICINE INDEBTED TO VON LINNÉ?

<u>Nyberg G¹</u>, Strand J¹. ¹Medical History Society Göteborg, Sweden

Five years after the demise of Carl von Linné in 1778 his only son who had succeeded him as professor in botany and medicine in Uppsala died and left the chair empty. Among those who aspired to the position was the court physician Sven Hedin. In order to qualify he wrote a thesis about Linné's contributions to Medicine, with some assistance from his pupil Christopher Carlander who defended the thesis.

All Linné's achievements were mentioned with the utmost praise; his classification of diseases, *Species Morborum*; his key to medicine, *Clavis Medicinæ*; his work on drugs *Materia Medica;* and his several theses and lectures on life-style matters, *Diæta*. Only a few critical remarks were given in passing: The *Clavis Medicine*, though said to be incredibly brilliant, was difficult to understand and not very practical. The authors were in favour of mothers breastfeeding their infants but Linné had had the opposite view.

The most important contribution von Linné made to medicine concerned the use of plants as drugs: he knew which plants were useful, which parts of them, in which season they should be collected, and by what related plants they could be substituted. Of particular importance was identification of Swedish plants that could replace exotic imported ones.

Hedin's praise of Linné's other contributions did not help him; the chair was given to Carl Peter Thunberg.

In his subsequent career Hedin was very active as a publicist of medical texts, but was considered rambling and incoherent. None of this characterised the thesis. His pupil Carlander never published anything after this thesis – he was as critical of himself as he was to others – but through his vast practical experience, his study of international literature, and his correspondence with authorities like Professor Pehr Afzelius he had a strong influence on medical science in Sweden during the first decades of the 19th century. He was intelligent and structured, and it seems that he may have had a steadying hand on Hedin writing the thesis.

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TAGE MALMSTRÖM – INVENTOR OF THE VACUUM EXTRACTOR

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In the middle of the 20th century thongs were still most often used to deliver babies in lifethreatening situations. Attempts had been made to design instruments to suck the baby out, but all lost their grip as the traction force was increased.

Tage Malmström born 1911 in Skåne had trained as a gynaecologist in Eskilstuna, Sweden before he was recruited to the Sahlgrenska hospital in Göteborg in 1949. His technical skills were recognised by Professor Emil Jerlov who gave him the task of constructing an efficient vacuum extractor. Much experimentation followed, models were tried on rubber balloons and improved, then tested in clinical situations. Controlled comparisons with thongs were never carried out, however, a fact that caused criticism and doubt. Malmström's Ph.D. thesis on the subject which he defended at the Karolinska Institute in 1957 was not given a high note – some professors thought it should not be approved.

Disappointed, Malmström returned to a heavy load of work as the clinic's main obstetrician. However, the clinical experience with the vacuum extractor was convincing, and its use soon spread within Sweden and abroad. Malmström was reluctant to appear at medical congresses but was happy to receive many guest colleagues and instruct them on the practical use of the extractor in various situations. He invented other useful gynaecological instruments, some based on vacuum too.

The most important use of the vacuum extractor has been in Asia and Africa, where midwives take care of many complicated deliveries. They can handle the extractor but cannot perform a caesarean section.

The lives of many thousands of women and infants have been saved by Malmström's invention.

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CONTROL OF SURGICAL SITE INFECTIONS IN NORTHERN EUROPE DURING 150 YEARS

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In the mid 19th century, the development of anaesthesiology made advanced surgery feasible. Simultaneously, it was realized that surgical site infections were caused by bacteria and could be prevented by scientific methods.

Prevention of microbial growth through antisepsis was attempted first, for hands (Ignaz Semmelweis), equipment and fluids (Louis Pasteur) and air (Joseph Lister). But all effective antiseptic agents are toxic also to living tissues, including wounds. Therefore, asepsis, i.e. prevention of microbial contamination of the surgical site, was needed. In Uppsala KE Lennander was a pioneer.

During the early 1900s, training of nurses and surgeons in maintenance of the sterile field and in prevention of cross-contamination was essential. When sulphonamides and penicillin came, belief that infections could always be treated lead to a slackening in infection control routines and to rapidly increasing antimicrobial resistance. Through contact with pioneers in Scotland and England, hospital infection control began to be implemented in Scandinavia. Microbiology laboratories expanded, resistance determination and typing of bacteria from wound infections made the tracing of organisms possible, facilitated by computer systems. Through phage-typing of *S.aureus* isolates, infections were shown to be transmitted both through infected patients and skin or nose carriers among staff.

In Uppsala, as in other teaching hospitals, thoracic surgery including open heart surgery was developed in the 1950-ies, when resources, e.g. Engstrom ventilators no longer needed for polio patients, were made available for intra- and postoperative care. In Sweden, the first infection control (IC) nurse was Ulla Carlsson (now 93) in Uppsala in 1964, and the first IC physician/microbiologist (Bertil Nyström) was employed in Stockholm at the Karolinska hospital. Infection control was achieved through disinfection and sterilisation of instruments, better hand hygiene, antimicrobial prophylaxis, optimization of the patients' vital functions, better operating room ventilation and clothing, but mainly through teaching and training.

Introduction from abroad of multi-resistant bacteria has now caused a new surge in infection rates, and the message from the 1960-ies lives: prevention of cross-contamination is vital.

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PRELINNAEAN CLASSIFICATION OF EGYPTIAN FLORA: BOTANY AS *PHARMACOPEIA* IN THE CASE OF *ARTEMISIA ABSINTHIUM*

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Modern taxonomy was applied by the Swedish botanist **Carl Linnaeus** to classify *Egyptian* flora. Before him, who introduced a classification based on the sexual parts of flowers and turned botany into a science, it had merely been a fringe of practical medicine, a *Historia Naturalis* observing different species. Developed as a *pharmacopeia* or as an 'astrological botany' in Ancient times, druggists and herbalists mastered the knowledge of simples and medicinal plants and later their 'mysterious sympathies' with the stars. *Ancient* Egyptians were the first to organize and categorize their medicinal plant *material* in medical texts as the Ebers Papyrus and also illustrated the herbals on Egyptian tomb wall paintings.

In Greece, **Diocles of Carystus** wrote about herbals although nothing remains while -**Theophrastus** in his *Historia Plantarum*, established a scientific method with a critical observation. Later on in Egypt, the <u>Alexandrian School</u> completed the written herbal

information. **Dioscorides** in Rome wrote *De Materia Medica* used in medicine until the 16th century and **Plinius** was the Father of Latin Botany with his *Historia Naturalis*.

In the European Middle Ages the first plant books, known as herbals, showed that Botany was still a part of Medicine. But during the European Renaissance botanical gardens of modern tradition were established in northern Italy that renewed interest in plants, first in Pisa and later the Botanical Garden of *the Simples* of Padova, until now in its original location, was the oldest academic botanic garden. Sea voyages of exploration brought botanical treasures to the large public. In the 17th century detailed plant descriptions became more botanical and evolved into the modern plant compilations called *Floras* including a collection of dried plants. The transition from herbal to Flora marked the final separation of botany from medicine.

Two names were important in the study of Egyptian classification, the Venetian physician and botanist, P. Alpinus and the Finnish student, Pehr Foskal who may well have influenced Linnaeus's thinking.

We will apply this evolution and the influence of mythology in the first notions about plants, studying *Artemisia absinthium*, <u>native</u> to <u>temperate</u> regions of <u>Eurasia</u> and <u>Northern Africa</u>.

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ON THE IMPLEMENTATION OF THE GREAT ACHIEVEMENTS IN MEDICINE IN THE NINETEENTH CENTURY IN A SMALL SWEDISH HOSPITAL – A REPORT FROM NYKÖPING COUNTY HOSPITAL 1835-1903

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The history of Nyköping hospital goes back to 1773 and registers with detailed medical notes from the reported period are available in the county of Sörmland archive. Information on every patient about name, age, social standing/profession, diagnosis, treatment, outcome and length of stay is with few exceptions available throughout the period. More detailed accounts of special medical interest as well as autopsy reports in key patients has often added to our understanding of how caring doctors judged the treatment possibilities and considered a realistic outcome under the circumstances. The report will give examples on how and when major break-throughs such as narcosis, antisepsis, Koch's postulate and different surgical procedures were implemented and made available to the general and mainly rural population within the framework of the welfare and transportation system of that time. A special reference will be given to the shift from acute life-saving procedures in incarcerated hernias to planned reconstructions of the abdominal wall in otherwise healthy persons together with achieved results. Appendicitis is another diagnosis where world-wide progress as documented in the medical literature can be compared with the actual handling of patients at the county hospital throughout the studied period.

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WORKING SAFELY WITH MEDICAL MUSEUM COLLECTIONS

<u>Sinisalo H</u> Helsinki University Museum, University of Helsinki, Helsinki, Finland During the past decades and centuries, medical objects have often been made of materials that are injurious to health. As people working with medical museum collections are constantly exposed to poisonous, unhealthy or otherwise dangerous substances and objects, investing in occupational safety is extremely important.

Medical collections often include a wide variety of different instruments, devices, specimens and other objects, and there are many possible threats. Wax models and moulages may be coloured with dyes containing lead, mercury or other heavy metals. Formalin used in wet specimens can evaporate. Asbestos is often used for heat insulation in incubators and sterilizers. Insulating oil in the transformers of e.g. X-ray machines may be carcinogenic Polychlorinated biphenyl (PCB). Mercury can escape from broken thermometers and blood pressure meters. Drugs may contain components such as arsenic, mercury, digitalis, monkshood, strychnine and radium. Ether, nitroglycerin and picric acid are explosive substances. Sharp instruments such as needles and scalpels as well as broken glass may pose a threat to museum workers. It's also possible that some of the instruments are not completely free of pathogens.

Helsinki University Museum has, in recent years, undergone an extensive transfer of both its permanent exhibition and its collection storages. Packing and moving tens of thousands of objects has meant having to investigate potential risk factors and improving the occupational safety practices.

Precautionary measures are very important when working with medical and scientific collections. Careful upfront planning and competent supervision of work, orientation of workers, a safe approach to work and suitable personal protective equipment are great methods for improving occupational safety. Vinyl gloves and a lab coat are the basic level of personal protection. When needed, the gear can be upgraded with e.g. a disposable respirator and nitrile gloves or, in extreme cases, with a powered air-purifying respirator and protective clothes covering the entire body. Organizing storages to be as safe as possible, using hazard warning signs and documenting both certain and suspected risks thoroughly also helps to prevent problems in the future.

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THE CHILDREN WHO SAVED THE ULTRA SOUND ECHO DIAGNOSTICS FROM A PREMATURE DEATH

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In the early years of the 1960s prominent physicists of the US Atomic Energy Commission declared that ultra sound echo diagnostics could NOT be used for any medical purposes. This statement put an end to all ongoing research in the US within this field until some young scientists in Uppsala (who had never heard about the Americans statement) made some very promising discoveries.

At the time the only existing methods for determining the size of the ventricles of the brain was through pneumo-encephalography or angiography. These methods required anaesthetics for children and could not be repeated due to the risks involved for the patients.

The new ultrasound-echo-diagnostic method called echo-ventriculography, invented by the young scientists from Uppsala, also included a new index that expressed the ventricle size in relation to the patient's own skull-diameter, the "Sjögren's index" or simply the Index value. Despite the earlier statement in the US not to use ultra sound for medical purposes, paediatrics and neurosurgeons no longer hesitated in using the new echo-ventriculography-method that very quickly became a well established examination tool.

The new method immediately opened doors for many other new inventions within the medical field. It all happened so fast that it was easy to forget how it all started – with an urgent wish to help the severely ill children with a less complicated and less painful method when examining their brain ventricles.

This exiting pioneer work took place some 50 years ago. The young medical doctor behind the new method also had the opportunity to see another old taboo or belief put to rest, the one claiming that malnutrition would NOT have any effect on the brains of small children. In the early 1970s an investigation took place in Addis Ababa, Ethiopia at the Ethiopian Nutrition Institute. (The Emperor Haile Selassie was still in office.) Using the echo-ventriculography method the investigation showed that the brains of a group of healthy and well nourished African children (The control group) where not different from the brains of healthy Swedish children. On the other hand malnourished African children suffering from kwashiorkor showed evidence of, when compared with the control group, significantly smaller size of the skull as well as increased sizes of the ventricles and also more fluid between the brain and skull bones. Thus, the brains of the malnourished children were smaller than the brains of the healthy Ethiopian and Swedish children, both absolutely and relatively.

After taking part of the results of this investigation, the Swedish ambassador in Kenya at the time concluded: "If small children suffer from malnutrition due to lack of food or the wrong kind of food, they will have fluid instead of brain inside their skull."

The results from the investigation in Ethiopia had an impact on the government in Nairobi, Kenya. The budget was from now planned so it would better favour the needs of the small children. Similar changes in the economic planning in favour of the children were soon to be followed in country after country, within the "Third World" (as it was called). Soon the improving of the child health was to be seen in the Swedish scientist Hans Rosling's statistics about the health of todays children in the 21st century.

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DR ANTON NYSTRÖM AS FOUNDER OF A POSITIVISTIC COMMUNION

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Anton Nyström 1842–1931 was a well-known Swedish physician. He was educated in Uppsala, Stockholm and Lund. He also studied at renowned clinics in Austria, England, France and Germany. He practised in Stockholm and had also for a time a private clinic there. He started the Workers Institute for education in Stockholm 1880. He was also a pioneer concerning sexology. He was a spokesman for religious freedom. He introduced the positivism of Auguste Comte in Sweden and in 1879 he founded a positivistic communion in Stockholm, an offspring of the communion in Paris. Comte had turned his philosophy to a secular religion of humanity with mankind as its object of adoration. Its prototype was The Catholic Church but it had a lot of "secular saints" instead of Her saints. Nyström's efforts

were not at all successful. He transformed pietistical hymns to positivistical songs by replacing Jesus with Humanity or Mankind and tried to convey positivism by imitating priests or lay preachers. After 23 years Nyström's Church was dissolved. The paper will discuss the aim of Nyström and the failure of his efforts.

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'THE MAGIC YEARS?' INTERPRETING THE HISTORY OF POST-WAR AMERICAN PSYCHIATRY

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The quarter century following the Second World War was a period of enormous transition, change and opportunity for psychiatry. Assessments of this era by contemporary psychiatrists (and subsequent historians), however, have varied wildly, leading to questions about the purpose and power of history, and its usefulness in informing both opinion and policy about mental health today. This paper examines an unknown historical manuscript that provides a unique, insider's perspective on the history of this divisive period.

Written during the early 1970s by Daniel Blain (1898-1981), a leading psychiatrist of the period, The Magic Years, cast post-war psychiatry in a warm, rosy glow. For Blain, psychiatry had moved ahead unprecedentedly, with psychiatric knowledge advancing, treatments improving markedly, old, crumbling asylums being replaced by community mental health care centres, funding for research increasing exponentially, and public and political awareness of mental illness growing unprecedentedly, leading to legislation such as the Community Mental Health Act (1963). Most encouraging were research collaborations between social scientists and psychiatrists that promised to elucidate the specific environmental causes of mental illness, resulting in preventive psychiatry. These were magic years, indeed.

Had Blain lived longer, of course, he might have seen these fruitful developments wilt on the vine. Yet, rather than scoff at Blain for being naïve, short-sighted, and present-centred, I argue that we can learn not only from his historical conclusions, but also from his strong desire to provide a historical account of the period and, in turn, reflect more deeply about why we write the history we do.

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ROBIN FÅHRAEUS – DISCOVERER OF THE E.S.R.?

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Fåhraeus (1888-1968) began his medical studies at Karolinska institutet 1908. During the internship period at the Southern Maternity Hospital in Stockholm he got interest in blood specimens from pregnant women and hoped to find a substance that could influence the delivery process. He tried to demonstrate this by treating rabbit uterus preparations with blood from pregnant and non-pregnant women. During these experiments he observed that blood specimens from pregnant and non-pregnant women behaved differently – the erythrocytes in specimens from pregnant women sedimented much faster. He could even by looking at the blood tubes tell which woman a blood specimen came from – pregnant or non-pregnant. Fåhraeus speculated whether this increased sedimentation of the blood from pregnant women

could be used as a pregnancy test. This was however not the case but Fåhraeus continued his study of the suspension stability of blood and concluded that the sedimentation rate was influenced by several disease processes and thus could be utilized as an unspecific but sensitive indicator of pregnancy and disease.

In his doctoral thesis of 1921 he refers to several of his predecessors who had studied the sedimentation of blood. He especially mentions the polish physician Edmund Biernacki, who however could not explain the mechanism behind the reaction he studied. This could according to Fåhraeus be explained by a derangement of blood globulins, especially an increased content of fibrinogen and its effects on the aggregation of erythrocytes.

The E.S.R. became a widely used test in the practice of .clinical medicine. On six occasion – from 1929 to 1941 – Fåhraues was nominated for the Nobel Prize in Physiology or Medicine but he never got the prize.

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PSYCHIATRIC CARE IN THE EYES OF FOREIGN VISITORS

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Travel reports from asylums abroad can provide a view of contemporary values and give impetus to analyses and comparative studies from today's perspective. In the 1880s, two foreign travellers visited Scandinavian asylums. They were G.A. Tucker, an Australian psychiatrist, and the American industrialist and philanthropist W. P. Letchworth. At the turn of the twentieth century, the Hungarian psychiatrist Kárlmán Pándy arrived. All three had undertaken study trips to many countries and made comparisons between them. They held up English and especially Scottish psychiatry as exemplary, in particular the openness and lack of coercion and the friendly, home-like care environments. At the end of the nineteenth century. Scandinavian travellers nevertheless regarded the German Alt-Scherbitz asylum with its lack of surrounding fences and well-developed allotment programme, as a model of coercion-free care. Scandinavian asylums seemed poorly equipped to the foreign travellers. Most critical was the American, by what he regarded as a harsh and forbidding attitude. His overall impression of the Scandinavian countries was that they were more interested in protecting society than caring for the patients. The visitors recorded the restraints they saw being used and the number of patients in isolation. It would appear that these visitors regarded a coercion-free and home-like environment as the primary criterion of good psychiatric care and that this was predicated upon careful recruitment and thorough training of suitable personnel. The European Psychiatric Nursing History Group worked five years from 2003 in order to meet the growing demand for critical understanding of psychiatric nursing practice in shifting psychiatric contexts, and to promote psychiatric nursing history projects. The use of coercive measures still represents ethical dilemmas and are based more on culture, traditions, and policies than on medical or safety requirements, with huge variety in types used. European Committee for the Prevention of Torture and Inhuman or Degrading Treatment or Punishment carries out several inspections of psychiatric health care facilities in Europe each year and publishes detailed reports.

THE WIKIKS PROJECT.

COLLECTING INFORMATION ABOUT THE "OLD" KAROLINSKA HOSPITAL BEFORE IT IS CLOSED AND PUBLISHING IT ON A WEBSITE.

Björn Wiklund

MD, PhD, Medical History Museum in Stockholm and The WikiKS project.

The Karolinska Hospital in Stockholm was opened in 1940 and thus celebrated its 75th anniversary in 2015. The hospital will now successively close down and move to the more up-to-date "Nya Karolinska Sjukhuset" (NKS).

In order to collect and save facts, stories, films and anecdotes for the future, an informal group "The WikiKS Project" was formed in 2015 with the intention to publish these on a website.

For this purpose we invited and gathered many present and retired doctors, nurses, physiotherapists and other occupational groups in three meetings in the Nanna Svartz auditorium in the hospital. All were encouraged to write down descriptions of their departments, personal remembrances and other things of potential interest and send it to the project group. The group has also contacted previous administrators and asked them to write down their memories. Films and art has also been searched for and photographed.

Early in 2016 the first version of <u>www.wikiks.se</u> was published. Contributions are still coming, continuously being published and thus the site is in progress.

One advantage of publishing on a website is that is possible to include many more pages and pictures for the authors and also to show films. There are many remembrance-books on hospitals in Sweden but the number of pages and pictures is restricted for economical reasons. When I am writing this abstract (2017-02-13) the number of pages in A4 format is 448 and to that comes films and older books about the Karolinska Sjukhuset.

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HOW LONG IS THE PERIOD NEEDED TO CONCLUDE THAT A PUBLIC HEALTH ACTION HAS LONG-LASTING EFFECT ON THE HEALTH OF PEOPLE?

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There is a myriad of modern studies about the effect of different public health interventions. However, the spatial and temporal variation of environmental and socio-economic conditions is enormous. Consequently the spatial limitations and normally the quite short follow-up times make these studies problematic when considering how well their results can be generalized in different historical contexts. Studies extending over centuries are needed to make any conclusions of the robustness of the findings. The aim of this study is to consider the long-lasting effect of public health actions on the health of people if extending the study period over one hundred years. There emerge only two actions, where the evidence reaches across thousands of years and cover very different societies: enough good quality water and food for the people. There is also two actions, where the long-lasting effect can be measured in hundreds of years: the isolation of the sick from the fit (e.g. quarantine) and small-pox inoculation and vaccination. Even these four assumptions of a long-lasting effect have

limitations (e.g. peacetime and favorable environmental conditions). All the other public health actions seem to need well-developed industrial society with appropriate skills (e.g. a high level of scientific knowledge) and establishments (e.g. laboratory networks) together with the capacity to enforce the decided actions to turn into reality (e.g. actions against tobacco and alcohol). Consequently all the actions taken during the last century are very liable to changing conditions (e.g. warming of global climate and relocation of people). The final conclusion of the study is that the ultimate prerequisite for maintaining and improving the health of populations is internal and external peace among human societies.

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ISRAEL HOLMGREN – PHYSICIAN, POLITICIAN, PATIENT

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Israel Holmgren (1871 – 1961) was one of the most prominent physicians in Sweden during the first half of the 20th century. He was Professor of Internal Medicine at the Karolinska Institute, Director of the Stockholm Seraphim hospital, editor of the scientific journal *Acta Medica Scandinavia*, member of the Swedish parliament, and honorary doctor at the faculty of medicine in Paris. As a researcher, physician and politician, Israel Holmgren lived a hectic life, with close ties to the contemporary scientific and political elites of Sweden and Europe.

Occasionally though, Israel Holmgren was also severely disabled by rheumatoid arthritis. For weeks, sometimes months, he was forced by illness to suspend his professional duties and enter health care as a patient. Some of these hospitalisations have been carefully documented. In letters and diary notes written by Israel Holmgren, and in medical charts held by the staff, a fascinating portrait appears of an individual at the same time both physician and patient.

In recent decades, studies have shown that when doctors become ill they face unique and significant challenges. As doctors become patients their professional and personal identity is often contested. Still, not much is known about how the dilemma of the sick physician has been dealt with historically. The aim of this paper is to highlight Israel Holmgren as an early example of a physician-patient role transformation. What was it like for Israel Holmgren to become ill and hospitalized in the early days of medical science? What did his help-seeking behaviour look like? How was he taken care of by the hospital staff? To what extent was he allowed access to the role of patient, and to what extent did he remain a medical practitioner during these hospitalizations?

When reading Israel Holmgren's diary notes parallel with his medical charts two different narratives of illness experience appear: the private/subjective and the professional/objective. As Israel Holmgren's reflections on his own illness are compared with experiences made later by other physician-patients, interesting similarities and differences appear. These will be further discussed and commented upon.