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# PSYCHOSURGERY IN SWEDEN 1944–1958

The Practice, the Professional and the Media Discourse

KENNETH ÖGREN



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Front cover: Photomontage and digital technique. A re-interpretation of the certitude of psychosurgery. The black butterfly symbolizes the disappearance of fear, anxiety, depression, obsession and other symptoms. From an idea by the author(. Picture, by author's wife, Birgitta Stål in collaboration with Per Stål.

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To my family, our children Ingela, Jenni, Johan  
and Anna-Clara and to my wife Birgitta.

To my parents Margit and Adolf in loving memory.

...no man such as a dentist, physician, writer or musician, who works with his brain, ...is likely to get back to his work after a lobotomy.”

*(Dr Walter C. Alvarez in quoting Dr Walter Freeman in an article in the American newspaper, the Daily Oklahoman, 1954)*

# ABSTRACT

Ögren, K (2007) Psychosurgery in Sweden 1944–1958, The Practice, the Professional and Media discourse. Doctoral Thesis 2007, Umeå University.

**Background.** The pioneering early experiments of prefrontal lobotomy were performed in 1944 by neurosurgeons in Stockholm in collaboration with psychiatrists. There was a rapid implementation of the new surgical approach. In 1946 and 1947 the two state mental hospitals, Umedalen and Sidsjön, introduced prefrontal lobotomy on a large scale. General surgeons now performed operations, a practice which was established all over Sweden. Prefrontal lobotomy was burdened, in certain city hospitals, by an initially high rate of postoperative mortality reaching more than 15 %. Pre-frontal lobotomy was phased out continuously already before 1950 and refined psychosurgical methods were introduced, but prefrontal lobotomy was still continued which lacked specialised neurosurgical units. The aims of the thesis were to contribute to and deepen the knowledge and understanding of the general and specific questions of early psychosurgery in its professional and social context.

**Specific aims:** (Explore the practice of prefrontal lobotomy at the Umedalen State Mental hospital and plot the frequency of psychosurgery operations in Sweden.

- Analyze the patients subjected to prefrontal lobotomy at the Umedalen State Mental Hospital 1947-1958, with respect to symptomatology and diagnosis, indications for the operation, gender distribution, postoperative mortality, the practice of consent and other clinical factors.
- Explore and analyze what was written on psychosurgery, when and how, and to identify differences, similarities and characteristics of the portrayal of psychosurgery in Swedish and American media 1936-1959.
- Explore and analyze the confluence of the role of the State authority, *The Swedish National Board of Health* (Medicinalstyrelsen), the professional discourses on lobotomy and the media portrayal, in dealing with problems of implementation and mortality.

**Results.** *Paper I.* At the Umedalen State Mental Hospital, 771 prefrontal lobotomies were performed 1947-1958 with an overall postoperative mortality of 7.4 %. Most of the patients operated on from Umedalen were women (61.2%) and most of the patients were diagnosed with schizophrenia. Of all the lobotomies performed in Sweden (approx. 4,500), 28% had been carried out at the Sidsjön and Umedalen State Mental Hospitals.

*Paper II.* A sample of 105 patients, who were studied in detail from psychiatric records. It was found that 79% had been six years in primary school and only 3% had a higher education. In an analysis of the descriptions of behavioural problems stated in the medical records, it was found that the female candidate for prefrontal lobotomy was described as suffering from different problems more often than the male candidate. Disturbing behaviour, fluctuations of mood and violence against others were the most frequently described symptoms most often referred to with respect to the female lobotomy candidate.

*Paper III.* In the comparative media study it was found that most of the articles on lobotomy in the Swedish and American media were positive or neutral towards psychosurgery, while very negative articles were least frequent. Neutral articles were more common in Swedish media (43%) while less common in the American media (19%). Articles being very negative towards lobotomy were considerably more often found in the American material (32%) than in the Swedish (14%).

*Paper IV.* The implementation of lobotomy was rapid in Sweden and more than 4000 lobotomies were performed between 1944 and 1964. It was considered feasible for prefrontal lobotomies to be performed by general surgeons and, from 1951, it can be verified that most hospitals (12/20) had engaged general surgeons for the lobotomy operation while a minority (8/20) had engaged a neurosurgeon. The Swedish State, through the *Swedish National Board of Health* was responsible of the allocation and surveillance of mental care. With a system consisting of a *Chief Inspector of Mental Care*, State mental hospitals were inspected annually. Medical superintendents were given full autonomy to decide on the implementation and practice of lobotomy. No indications were found of any significant interference by the *Swedish National Board of Health* restricting lobotomy.

**Main conclusion.** Medical superintendents were given full autonomy to decide on the clinical practice of lobotomy. Being left in the periphery of neurosurgical facilities, this led to their engaging general surgeons. Patients were operated on in surgical theatres lacking the sophisticated technical equipment of coping securely with haemorrhages, which were common in the early implementation of the operation. The practice of lobotomy in some mental hospitals was extensive and postoperative deaths were numerous but the *Swedish National Board of Health* took a defensive role and, even with the annual inspections, there was no important interference with the lobotomy question. Swedish media reported mostly positively on lobotomy, underlining the promising prospects of the new method submitted by the early proponents without critical questioning or independent investigations.

**Keywords:** *lobotomy, Sweden, schizophrenia, mortality, gender, behaviour, implementation, media, discourse, profession, neurosurgeon, psychiatrist, medical superintendent*

## ORIGINAL PAPERS

The thesis is based on the following papers, which will be referred to in the text by their Roman numerals. The papers were reprinted with permission from the publishers.

- I. Ögren K, Sandlund M. Psychosurgery in Sweden 1944–1964. *J Hist Neurosci* 2005;14(4):353-67.
- II. Ögren K, Sandlund M. Lobotomy at a State Mental Hospital: A Survey of patients operated during the period 1947 to 1958. *Nord J Psychiatry*. In press.
- III. Ögren K, Lindblad I-B. Lobotomy in Swedish and American media 1936–1959. Manuscript.
- IV. Ögren K, Sandlund M. Implementation of Lobotomy in Sweden. The Role of the State and the Professions. Manuscript

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## ABBREVIATIONS

|     |  |
|-----|--|
| NBH | The Swedish National Board of Health (Medicinalstyrelsen)        |
| SLR | Special lobotomy records from the Umedalen State Mental Hospital |
| OCD | Obsessive Compulsive Disorder                                    |
| ECT | Electric Convulsive Therapy                                      |
| NMD | Neurosurgery for Mental Disorder                                 |
| DN  | Dagens Nyheter (a Swedish national newspaper)                    |
| VF  | Västerbottens Folkblad (a regional Swedish newspaper)            |
| VK  | Västerbottens Kuriren (a regional Swedish newspaper)             |

## PREFACE

Even though I am neither a physician nor a psychiatrist, I have always been deeply interested in medicine. As a young child I appreciated very much joining my mother, who was a nurse's assistant, in the operating room of the small rural hospital, where she worked. My imagination concerning the surgical procedures carried out by the district hospital physician made me stare intently through the glass doors behind which the surgical instruments were kept.

When I was 12, being all alone at home, I had a chance to see a Hollywood film, "The Snake Pit", which was a story of an American woman who, after a nervous breakdown, was sent to a state mental hospital where she was treated with ECT. It was really horrifying for a 12-year old boy. Having always been curious about the unknown, I did my best, later in life, to face all the questions that occurred, in different ways, during my childhood. Entering the path, finally, to find out about surgery and psychiatry, the subject of the history and practice, the debates and controversies inside and outside the medical professions and the media and the discourse of psychosurgery became the subject for my research efforts. The dominating feeling, during my thesis project, has been that research is a never-ending way to satisfy a curious mind.

A good start to a news article is to focus on the most recent link in a chain of events. Another point of departure, to gain a better chance to be read, heard or seen, is to introduce a story with the most sensational facts. Such facts have not been lacking in my journey through the history of psychosurgery in Sweden. I came across a great many findings that have upset me (my journalistic identity) and even so these dramas have been quite tempting to put forward in neat portions in a journalistic presentation. In interviews I have given, speeches I have made, and in the papers I have written, it has been difficult to restrain the sensational facts.

In the first official presentation of my research project in 2000, I was invited to the Medical History Museum at Eugeniahemmet in Stockholm, to receive a prize for the best medico-historical thesis project outline. I remember the reaction among the many retired, grey-haired doctors who listened when I told them about the discovery that children in Sweden had been lobotomized. There was a sigh in the audience.

After this very early lecture on the history of psychosurgery I also understood the relevance in my premature conclusion in 1985 – which I had come to after having written an historical article for the Umeå Public Health Services District (Umeå sjukvårdsdistrikt) publication, "Sticket" – that lobotomies at Umedalen would interest a wider audience including the medical professions particularly. But even so the many, many others, the relatives who gave their consent to lobotomy and the children of the lobotomized who, long ago in their childhood, had had some vague awareness that something strange had been done to their mothers or fathers.

Since I started on my lobotomy project in much has happened within the professional and lay spheres in accordance to psychosurgery. In Sweden where the psychosurgical technique of capsulotomy (modern stereotactic psychosurgery) was applied for many years, a recent study

found – notwithstanding its effectiveness of reducing serious symptoms of OCD – that the operation carries significant risk of substantial side effects (Rück 2006). In America, Walter Freeman, the American introducer and “father” of lobotomy, still haunts in the background and came to life again in a recently published book (el-Hai 2005).

No final chapter or epilogue on this most controversial subject of modern psychiatric and surgical practice seems ahead.

# INTRODUCTION

My research into the history of psychosurgery has opened up a field that was even more interesting than I could imagine. If one tries to outline a “think globe”, putting “*psychosurgery*” in the epicentrum, there would be numerous links in various directions with lots of possible stops for reflections along the line.

The design of this thesis, with stops only at the *practice*, the *professional* and the *media* aspects, would then be regarded as a futility. The “psychosurgery globe” could be filled with much more. In this thesis the factors that stimulated or hampered the growth and establishment of psychosurgery have been investigated in some respect.

Psychosurgery must still be comprehended as a way of coping with mental illness, which is understood to be represented in the most delicate human organ, the brain. Taking into respect the mysterious brain, concerning which even our stage of knowledge must be regarded as minimal, it is all the more interesting that a neurosurgeon ventures to touch this immensely complicated organ at all on psychiatric grounds. Psychosurgical methods are applied to the brain, which is the centre of thinking and feeling and – if there is one – also to the seat of the soul.

Dr Gösta Rylander (1903-1979), one of the key persons in the history of psychosurgery in Sweden, in front of psychiatric and neurosurgical expertise, has frankly described what was done to a patient who had a lobotomy:

*In fact, the operation is performed in order to change the depressed, introverted, self-occupied patients into euphoric, extroverted, easygoing persons<sup>1</sup>.*

## From then to now

The controversy of psychosurgery has been rather extensive ever since the Swiss psychiatrist, Gottlieb Burchardt carried out his very first psychosurgery operations at the end of the 1880s (Stone 2001). Psychosurgery has been under debate all the way through its history. In America, Crawford, Fulton and Jacobsen carried out experiments in the 1930s. They induced experimental neuroses in the chimpanzees Becky and Lucy, which were then followed by the bilateral removal of frontal areas. The effect was studied and communicated (Crawford et al. 1948).

It has been argued that Egas Moniz was inspired by these experiments when, in 1936, he applied frontal lobe surgery to humans. Fulton (Fulton 1949) defused the connection of Moniz and his group by stating that Moniz, before the American chimpanzee experiments, had already considered surgical interference with the human frontal lobes referring Moniz's idea to Brickner (Brickner 1936).

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<sup>1</sup> Rylander G (1947) Personality analysis before and after frontal lobotomy. In: *Research publications association for research in nervous and mental disease: the frontal lobes* (Fulton JF, Aring CD, Wortis BS, eds), p 692. Baltimore: Williams & Wilkins.

## Psychosurgery revised and continued

There has been an ongoing change in the technology of psychosurgery, from the application of the “ice-pick-method” in the USA by Walter Freeman (Freeman 1948) in the 1940s and the 1950s, to the introduction of less invasive open methods such as topectomy (Poppen 1948) and cortical undercutting (Scoville 1948). The indications have changed and operations have been performed on criminals, children, psychopaths and sexual offenders. Drug abusers in Russia and in China (Orellana 2002) were recently operated on with the controversial method.

Even within the denominations of procedures in the field of psychosurgery, such as the change from psychosurgery to NMD (neurosurgery for mental disorders), there is still controversy within and between professions on the subject of psychosurgery.

In the public sphere, a group of relatives of “lobotomy survivors” in the US is acting to gain recognition in several ways<sup>2</sup>.

In the field of international historical research on psychosurgery, there are reports from both Brazil and Japan from colleagues who are studying psychosurgery.

## Lobotomy and the Nobel Prize

The 20th century saw two, and only two, Nobel prizes clearly linked to clinical psychiatry. In the 21st century a Nobel Prize with bearing on psychiatry was rewarded to Arvid Carlsson, Paul Greengard and Eric Kandel (one third respectively) in 2000 for their discoveries concerning “signal transduction in the nervous system”.

In 1927 Julius Wagner von Jauregg (1857–1940) received his prize for the application of using malaria-infected blood, which was injected into patients with neuro-syphilis (Wagner von Jauregg 1919), which, due to the fever attacks produced, could stop the growth of spirochetes in the brain. In the late stage of neuro-syphilis, patients ended up as totally demented.

This discovery by Jauregg was extremely significant in psychiatry and the history of medicine. The second Nobel Prize, with a bearing on clinical psychiatry, was the 1949 prize awarded (1/2) to Egas Moniz, “for the discovery of the therapeutic value of leucotomy in certain psychoses” and (1/2) to Rudolf Hess for his discovery of “the functional organization of the interbrain as a co-ordinator of the activities of the internal organs”. The Nobel Prize for lobotomy is interesting from the point of view of how the final decision was made to nominate Moniz<sup>3</sup>.

In 1943, Walter Freeman suggested to the Nobel Committee that Egas Moniz should be nominated for the 1944 Nobel Prize for “his fundamental contribution to the surgical treatment of functional mental disorders”<sup>4</sup>.

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<sup>2</sup> (<http://www.psychosurgery.org/>). Some years ago the organisation wrote to the Swedish Nobel Committee and urged that Egas Moniz should be deprived of his Nobel Prize.

<sup>3</sup> For a detailed history see Stolt, C-M (2002) Moniz, lobotomy, and the 1949 Nobel Prize in. *Historical Studies in the Nobel Archives: The Prizes in Science and Medicine*, Elisabeth Crawford (Editor), Tokyo: Universal Academy Press, 2002, pp 79–95.

<sup>4</sup> Letter from Freeman to the Nobel-Committee for Physiology and Medicine dated December 1, 1943 in the archives of the Nobel-Committee.

A Professor of psychiatry, Erik Essen Möller, evaluated the work of Moniz and his candidature. In the report (Betänkande angående Antonio Egas Moniz) he wrote that he had found unsatisfactory evidence of the value of Moniz' lobotomy; "the theoretical considerations which led Moniz to his method seem so loose that his own material, due to the short and relatively superficial observations (of the patients, author's remark) can hardly be regarded as being convincing"<sup>5</sup>. Moniz was not nominated.

In 1949 Moniz was nominated again and considered for the Nobel Prize. At this time, the report was written by the neurosurgeon Herbert Olivercrona. After referring to the good results of 1000 lobotomies in England and more argumentation, he ended his evaluation of Moniz lobotomy by depicting it as a "a great therapeutic step forward"<sup>6</sup>.

## **Surgery as a method within psychiatry**

Surgery has earlier been applied in psychiatry. At the end of the 19th century, as a consequence of the so-called focal infection theory led to surgical procedures on patients diagnosed with mental illnesses (Cotton 1922). Henry Cotton, on the basis of this theory, started to perform detoxication procedures such as the removal of teeth and tonsils from psychotic patients. In female patients where an infected cervix was found, the "Sturmdorf-method" of "conical enucleation of the cervix" was carried out.

## **A brief history of psychosurgery**

Psychosurgery has been a topical subject ever since the first experimental operations on the human brain were carried out on psychiatric grounds in Switzerland during the 1880s.

Gottlieb Burchardt's daring operations, when he performed focal cerebral cortical excisions of the brains on six severely deteriorated patients diagnosed with schizophrenia, attracted so much criticism from his colleagues that Burchardt stopped performing the procedures (Stone 2001).

Psychosurgery, from its early technique used by Moniz and Freeman/Watts during the 20th century, has been surrounded by significant deep scepticism both inside and outside the medical profession, among neurologists, psychiatrists, psychologists and psychoanalysts, as well as in ethical (Meyer 1948, editorial *Br. Med. Journ.* 1952, Silbermann & Ranshoff 1954, Kautzky 1958) and paediatric circles (Smith, 1951).

It has been calculated that 40,000–50,000 patients have had their brains operated on with different surgical procedures during the 20th century. How many were cured, how many became amenable in their mental hospital setting, how many could leave the hospitals, how many adapted to a working life outside the institutions or how many died post-operatively from surgery? Most of the answers are not known.

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<sup>5</sup> Document from the archive of the Nobel Committee, Stockholm. Avd III:7, 1944, sekret handling, betänkande angående Antonio Egas Moniz av Erik Essen-Möller (Department III:7, 1944, confidential document, report on Antononio Egas Moniz by Erik Essen Möller) p 10, translation by the author of this thesis.

<sup>6</sup> The document is to be found in the archives of the Nobel Committee, Stockholm.

## Psychosurgical techniques

Since Burchardt, (1890), Puusepp, (1937), Moniz (1936, 1937) and Freeman, (1936), psychosurgery has been refined to a less invasive operation, and surgical techniques with more restricted targets in the brain have been introduced throughout the history of psychosurgery.

The introduction of stereotactic approaches, by Spiegel and Wycis (Spiegel et al., 1947) and by Leksell (Herner, 1961), and techniques such as cortical undercutting (Scoville, 1948), topectomy (Poppen, 1948), cingulotomy (Foltz & White, 1962, Lewin, 1962), anterior capsulotomy (Talairach et al., 1949), amygdalotomy (Narabayashi, 1963), and postero-medial hypothalamotomy, (Sano et al., 1970) are some of these.

The progress of psychosurgery technique can be described as a transition from ‘blind’ methods, such as the Moniz and Freeman/Watts procedures, to more open methods in which the surgeon can control the operation, methods with fewer fatalities, fewer side effects and a lower rate of post-operative mortality. Spanning over the decades, the recent psychosurgery procedures have become more precise and there has been a change in defining psychosurgery procedures, more so in terms of “functional neurosurgery”, NMD (neurosurgery for mental disorders).

With the historical burden from serious criticism, [Heller et al. 2006], directed at psychosurgery, at the moment there is careful restraint to be found amongst some neurosurgeons concerning the ethical problems in connection with psychosurgery.

By the method of neuromodulation, DBS (Deep Brain Stimulation) which is tried today electrodes (linked to a deep brain stimulator) are placed in the brain on psychiatric grounds. It is stressed that this new “follower” of the older and irreversible and invasive psychosurgical technologies must be ethically considered and a closely collaborated on amongst the neurosurgeons and the psychiatrists (Fins et al. 2006).

It still remains unclear concerning psychosurgery, its usefulness and effectiveness in alleviating the very serious and unbearable symptoms in a mental disease such as the Tourette syndrome [Anandan et al 2004] but still the “last resort” operation is used.

### **A recent example – the “last resort” in 2002**

When he was 14 years old, David was referred to hospital for treatment of severe self-injurious behaviour (SIB) of 10 years’ duration. He had pulled out permanent teeth, had made multiple attempts to ingest toxic substances and had stabbed himself with different objects on numerous occasions. He was diagnosed with attention deficit disorder (ADHD) at the age of 4. At age 5 he began to exhibit obsessive-compulsive (OCD) symptoms and at age 8 he was diagnosed with Tourette’s Disorder (Sharadamani & Wigg 2004).

A large number of medications were tried (the author’s enumeration of the different medications used include, for example, Ritalin, Imipramine, Clonidine, Depacote, Haldol, Zoloft, Anafranil, Oroloxin, Prozac, Effexor, Lithium, Luvox, Klonopin, Ativan, Naltrexone in different periods and doses).

After referral, David was given behavioural therapy and one to one supervision.

His injuries needed multiple surgeries for the removal of foreign objects he inserted into wounds to his legs. From inpatient psychiatric care he was moved to a neurological reha-

bilitation center for intensive treatment, with trials of different medications, which were not beneficial, except from some improvement of tics. SIB continued to increase in frequency and severity. It was considered that all pharmacological and behavior therapies had been exhausted (ibid)

In that situation David's mother considered psychosurgery to control his SIB. The case met criteria for indications, despite the patient's age. David's case was referred to a committee in the psychiatric department for the review of the complicated case. Members outside the team of the psychiatric department, and which also consisted of members from the National Alliance for the Mentally Ill (NAMI) (ibid), made the ethical review.

Recommendation for a stereotactic cingulotomy<sup>7</sup> was approved, videotaped informed consent was obtained from David's parents and assent from David. One month postoperatively David relapsed into SID and began to stick a coat hanger tip into his legs. Different medication was tried. Seven months after cingulotomy, neurosurgery was consulted for a further intervention with limbic leucotomy, again with a similar process, the new procedure was approved. An expanded University Ethics Committee considered that "the risk and consequences for surgery were less than the continued risk to the patient from his chronic SIB". He was operated on in late 2002. David improved and he was medicated and given behavioural treatment in a residential treatment center. He made progress with a reduction in the frequency and severity of SID (ibid).

David's case was presented in 2004. The severity of his condition, it is understood, was immense. Parents, doctors, and ethics committees reached a consensus for the decision of applying "the last resort" and even a second "last resort" to control David's SIB.

It would be hard to challenge the ethical considerations of the case. This case may be compared to the lack of ethical considerations of lobotomies in which children, due to behaviour disturbances<sup>8</sup> and a variety of indications, were lobotomized in different countries around the world during the early history of psychosurgery. What has happened in Davids' case since the operation in 2002?

This is one answer:

*I'm pleased to inform you that he has had no self injurious behaviour and it is now 5 years since the second and final surgery (cingulotomy). He still has other serious psychiatric problems and requires residential care coupled with medication, but his compulsive SIB is no longer an issue. In his words following the surgery, "my brain is calmer.*

(Personal communication: Dr Christopher R. Thomas, Department of Psychiatry & Behavioral Sciences, University of Texas Medical Branch at Galveston, e-mail 2007-03-14)

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<sup>7</sup> Cingulotomy = The psychosurgical method in which specific fibre bundles of the cingulum is the surgical target of the psychosurgical procedure. (Heimer L: *The Human Brain and spinal Cord*, Second edition, 1994, p. 419)

<sup>8</sup> Nine children with behaviour disturbances were lobotomized with the Freeman-Watts technique, the operation being regarded as being particularly effective in symptoms such as: exhibitionism, destructive and perverse trends, impulsiveness, verbal automatism, epileptic fits, anxiety crisis, wrath, outbursts, escaping trends, and environmental apathy (source: *Psychosurgery*, 1st International Conference/ Lisbon 1949, pp 129-145).

## Underlying theoretical basis of psychosurgery

Theories on the functional organisation of the brain make up an underlying basis for the later theories of applications of surgical procedures with the aim of breaking up certain areas in the brain in the hope of liberating patients from undesirable symptoms of mental illness. One such basis was the idea that the brain was in control of behaviour which led to the idea of *specificity* (localization of function) and thus that regions in the brain were responsible for different psychological functions. Gregor Reich's (1467–1525) depiction of these regions of the brain shows that the organs of sight, taste and hearing are all located in the frontal lobe of human beings. Reich described the *ventricular theory*. There was no empirical support for the theory because “its roots lay not in science ...but in mysticism and magic” (O’Callaghan, 1982).

Two decades later Franz Gall (1758–1828), an anatomist, formed a thesis arguing for a specific relationship between different cranial characteristics and functions in man. A follower of Gall, Spurzheim (1776–1832), later gave the theory status of a discipline, *phrenology*. As with the idea of *specificity*, phrenology has been dismissed as pseudo-science. Interestingly enough, *The Journal of Phrenology* survived from 1823 to 1911, and phrenology was a seriously considered subject. Its applications also survived within the then used methods of analysing racial similarities and differences and anthropo-metrical values (ibid).

The phrenology track was followed and different scholars developed the theories. Paul Broca (1824–1880) studied and described a patient with severe disturbance of expressive speech who communicated by signs (O’Callaghan, 1982). After an autopsy of his brain, a lesion was found in the “interior frontal gyrus of (the) left cerebral hemisphere”. Broca postulated that this was the centre for language expression. He named the loss of this ability “aphasia” and that it had its localization in this specific area. Broca received much enthusiasm and he was able, in a scientific manner, to give the earlier rejected phrenology principle acceptance. Carl Wernicke (1848–1904) followed in 1873 along the line of Broca and carried out investigations in which he could establish a sustainable conclusion that the region of the posterior third of the left superior temporal gyrus housed the understanding of speech (ibid).

In 1870, Fritsch and Eduard Hitzig (1838–1907) experimented by inducing electrical stimulation of the cerebral cortex of dogs, Ferrier (1843–1924) confirmed the experiments on monkeys and extrapolated the findings to the human brain. These sensory and motor localisation findings soon entered into the mapping of complex mental processes and Kleist (1879–1960), in 1934, produced details in a map of “*narrow localisation*” where he identified different functions within the human brain. But *narrow localisation* has been subjected to criticism (ibid).

The proponents had found a rationale for the conclusion that a function is located “when its permanent loss followed damage to some circumscribed area of the brain”. Opponents challenged the logic in this conclusion. One scholar commented on the cerebral localisation of speech; “To locate damage which destroys speech and to localize speech are two different things” (O’Callaghan, 1982).

## SWEDISH MENTAL CARE IN THE 40S

The situation within the Swedish state mental hospital system was serious at the end of the 1940s. From 1944 the number of in-patients steadily increased and by the end of 1948 there were 21,939 patients inside the mental hospitals. This over-burden of patients was considerable, a number of hospitals having with a rate of 35–40 %.



**Fig.** A room to sleep in for twenty-seven mental patients in a Swedish mental hospital

The *Chief Inspector of Mental care* of the Swedish National Board of Health (Medicinalstyrelsen) did not attempt to soften his words and was of the opinion that the situation, mainly typical of the most unruly wards, created an insufferable situation, which was a poor setting for the potential use of adequate therapy for the patients. Furthermore the situation according to the Chief Inspector, led to an increase in the use of restraints. A tendency he had seen during inspection rounds was that restraints, such as being tied to the bed, were more often used on women.

At Umedalen State Mental Hospital, for example, 43% of all women in-patients on a certain date of inspection in 1948 were restrained in bed (ref report 1948). The Chief Inspector, in his 1948 report to the Board of Health (Medicinalstyrelsen) frankly concluded;

”By no means, could this be characterised as psychiatric care – instead it is more mismanagement of the mentally ill.”

In this context though, the Chief Inspector had a positive attitude to the then recent introduction of psychosurgery into the Swedish state mental hospitals and declared in his report of 1948 that the 419 operations carried out so far in the country had been, “on the whole, favourable”. This indicates, considered in more detail below, that the Chief Inspector had

an initially supportive attitude to a transformation of the practice of psychosurgery where general surgeons had become “interested in lobotomy” (ibid).

The State Mental Hospital of Umedalen in Umeå carried out most of the pre-frontal lobotomies compared to all other mental hospitals in Sweden.

The finding that one single hospital, the Umedalen State Mental Hospital in Sweden, with approximately 1000 psychiatric beds, carried out 771 prefrontal lobotomies through the years evoked a number of questions which have now been answered, in some respects.

## GENERAL AIMS

- a. To explore the early development of psychosurgery in Sweden.(I)
- b. To explore the practice of lobotomy at the Umedalen State Mental Hospital as a case example.(II)
- c. To explore and analyze the discursive practice of lobotomy in Swedish and American media.(III)
- d. To explore and analyze the role of the state and the professions in the lobotomy case.(IV)

# MATERIAL – METHODS

## Paper I

### **The Umedalen clinical material**

A clinical material consisting of different documents concerning the practice of lobotomy at one Swedish state mental hospital, Umedalen, has been used. The material was collected more than 25 years ago for a research project, which was not fulfilled.

Parts of the material consists of the clinical data collected by the former Head of Umedalen State Mental Hospital, the first medical superintendent, Dr. Gösta Eriksson who took up this position at Umedalen in 1934 when the hospital opened.

As far as we know from our survey of the literature on lobotomy in Sweden, this material has not been mentioned earlier. The material consists of:

- Letters from the medical superintendent of Umedalen to colleges in Swedish mental hospitals.
- Letters to the Umedalen medical superintendent from colleges in other mental hospitals.
- Circulate communication from the Swedish National Board of Health.
- Clinical notes on patients and a special lobotomy record (SLR) of the first 118 female patients who were lobotomized at the mental hospital.
- Basic data of patients lobotomized compiled by a former investigation for a research project in the 1980s.

### **The Annual reports**

In order to describe the frequency of psychosurgery procedures on the national level, searches were carried out in the archives of the National Board of Health (Medicinalstyrelsen), where all annual reports from Swedish state mental hospitals are kept.

The obligatory reports from 28 Swedish State mental hospitals to the National Board of Health, for the years of 1947–1966, were collected and studied considering the practice of lobotomy. Both the quantitative and qualitative data from the material was considered for the exploration and the analysis.

## Paper II

A total of 771 patients subjected to lobotomy during the years 1947–1958 were identified. From these, a sample of 105 patients, was selected for the purpose of obtaining detailed data from the psychiatric records.

The sample was scrutinized for a number of factors; gender, the educational background

of the patients, profession, marital status, number of children, other treatments tried pre-operatively, time spent in hospital, consent for the operation, dates of operation/re-operation, post-operative mortality and diagnosis.

Close reading of the records seldom revealed strict descriptions of indications for the lobotomy operation.

To illuminate the reasons for the decision to operate, we summarized daily notations made in the records before an operation was undertaken. Then, with a method of qualitative and quantitative content analysis, an identification and classification of the explicit descriptions of symptoms and behaviour from summaries on each patient was made. Two research assistants recorded all the data. SPSS software, version 11.0 was used for the statistical analysis.

## Paper III

To explore the media discourse on lobotomy in Swedish and American media, the historical material of 111 Swedish and American articles from newspapers and popular press from the years of 1939–1959 were investigated. The interest was to analyze what was written on psychosurgery, when and how, and to identify the differences, similarities and characteristics of the depiction of psychosurgery in the Swedish and American media.

A thorough coding instrument was constructed for a content analysis of the 111 articles which each represented one research object. The articles were analyzed by the use of a quantitative analysis and data was transferred to a statistical data instrument (SPSS). A qualitative analysis was applied so as to enable further analysis and to provide detailed accounts of, and examples from, the quantitative findings.

## Paper IV

Based on the finding from the media study (Paper III) indicating problems with the post-operative mortality of psychosurgery in Sweden this investigation was instituted. Starting from one article published in 1951 we continued with a research process by inquire into documents from the Swedish National Board of Health (Medicinalstyrelsen) on the role of the State, as of their surveillance of Swedish mental care and their role in the process of the implementation of the technology of psychosurgery.

The investigative approach was undertaken in an effort to deepen the understanding of the problems of the implementation of psychosurgery and to analyze the role of the State during the early history of psychosurgery.

The aim of this investigation was investigate and to analyze mechanisms that affected the implementation of psychosurgery in Sweden.

The archive of the National Board of Health was approached for the identification of documents indicating the problems surrounding the lobotomy question.

The identified documents were analyzed with a qualitative method.

An extensive number of papers from Scandinavian and international medical journals on the subject of psychosurgery was collected for the purpose of building up a body of references to psychosurgery.

## RESEARCH METHODS

The methods use for this dissertation project has mainly been explorative. Registers, different archives, surgical and psychiatric records were examined for the process of collecting the relevant data for the project.

For the media study (Paper IV) Swedish and American articles were collected and analyzed with a combination of quantitative and qualitative method and analysis were made with a social constructive perspective.

### **Ethical research considerations**

The purpose of researching the topic of early psychosurgery was to explore the situation of an unprivileged group of patients, in which a controversial method was widely used not a long time ago.

### **Document security**

Personal and confidential data concerning psychiatric patients have been used for the research purposes of this thesis. Data were derived from psychiatric and surgical patient records. The psychiatric records are kept in an archive which is situated within the premises of the Clinical Department of Psychiatry. For the surgical patient records, a permission was obtained from, at the time of the actual searches, the Department of Surgery, now under the name of the Division of Surgery.

The surgical records were studied by the author by visits in the archive localities. Data derived were written down on paper and some documents were photocopied. The psychiatric records were collected by two research assistants, especially engaged for the research project. The psychiatric records were then moved into a locked research facility at the Division of Psychiatry to be available for the project. All confidential data used by the author were safely locked in in both of the departments where the author was active.

### **Research ethics of patient records**

What this project concerns the bulk of patients under investigation from the psychiatric and surgical records are not alive. In the project no human biological material has been used.

An important point of departure in research ethics is the integrity/privacy of those who are not alive and who have been under psychiatric treatment or psychiatric care. Since the data are presented on a group level, single patients can not be identified. Due to this research approach patients personal integrity has been respected.

One may have considered the option of indentifying the relatives of the lobotomized patients but in so doing one would have been at risk of revealing facts unknown to relatives. Such exposure of facts to the relatives might be perceived as deeply unwelcome and unnecessary.

In calculating on benvolence contrary to maleficence of asking relatives for a permission to take out data from the psychiatric or surgical records was estimated as being an unethical undertaking.

## RESULTS

More results are presented here in addition to those in papers I–IV in the thesis. This is due to the text space limitations in the journal papers.

### The professional frame

#### American contacts 1930-1950

Snorre Wohlfahrt (1895–1969), a psychiatrist and Olof Sjöqvist (1901–1954), a neurosurgeon practicing in Stockholm, were both important in the early history of psychosurgery in Sweden.

They had had close contacts with medical academic circles in the United States. Wohlfahrt made a long trip in 1939 and visited several American mental hospitals, and he also met well-known psychiatrists and neurologists such as Walter Freeman and Manfred Sakel (Wohlfahrt 1939).

Olof Sjöqvist spent one year<sup>9</sup> with John Fulton (1899–1960) at his laboratories in New Haven, Connecticut (Olivecrona 1955). John Fulton, a physiologist, was deeply interested in the frontal-lobe function and had connections with researchers who had made the early experiments of frontal-lobe operations on the chimpanzees, Becky and Lucy (Horowitz 1998).

#### Gösta Rylander and the brain tumour study

In 1939, Gösta Rylander<sup>10</sup>, a forensic psychiatrist, had studied post-operative personality changes in patients who had been operated on for tumours of the frontal lobes. He underlined the need for collaborative professional efforts;

*Closer co-operation between workers in experimental animal psychology, brain surgeons and psychiatry should lead to great things.*

Rylander suggests, even before psychosurgery came into practice in Sweden, that there is a certain responsibility on the part of the psychiatrists and neurosurgeons after brain surgery procedures. Rylander is of the opinion that the psychiatrist should be there to assist a patient operated on who is in the process of re-adjusting into society. Addressing the surgeons, he strongly advocated;

*The brain is the most noble and highly developed organ of the human body. If one removes parts of it, it is surely one's duty to ascertain the effects of its functions* (Rylander 1941).

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<sup>9</sup> Dr Olof Sjöqvist had studied one year with the physiologist Dr John Fulton in New Haven, Conn., USA and he returned to Sweden in 1943. (Ljungren B, Sundbärg G.: Sektionen för neurokirurgi (the Section of Neurosurgery) in *Svenska Läkaresällskapet 175 år. (175 Years with the Swedish Society of Medicine) Svenska Läkaresällskapet Handlingar, Hygiea, Acta Societatis Suecane, band 92 häfte 6: 1983, p.138.*

<sup>10</sup> Gösta Rylander (1903–1979) described personality changes after operations on the frontal lobes in his thesis in 1939, *Personality changes after operations of the frontal lobes, A clinical study of 32 cases.*

## The psychosurgical technology is tested

### The Serafimer Hospital Series

The very first pre-frontal lobotomies in Sweden were made in August 1944. The operator was Dr. Gösta Norlén, a neurosurgeon at the Neurosurgical Department of the Serafimer Hospital (Serfimerlasarettet) in Stockholm. In the series, 44 women and 4 men were operated. Of those operated on, six had a diagnosis of chronic depression, seven depressive psychopathy, four had anankastic syndromes, one torticollis spastica (depression), one paranoid psychosis, one hysteria ("organic syndrome?"), 26 were diagnosed with schizophrenia and one with oligophrenia (Hafström 1945).

To evaluate the results, three classifications were used; 1) "greatly improved" (the patient could be discharged, go back to work, resume household management etc), 2) "improved" (implies that a patient was transferred from a disturbed ward to a quiet ward, returned to their homes, resumed their regular duties, e.g. as a teacher and so on) and 3) "unimproved", meaning that there was a transient disappearance of morbid symptoms, which, however, returned. Wohlfart summarized the results: 20 patients (42%) were thus greatly improved, 9 patients (19%) improved, 17 (35%) unimproved and two (4%) died as a result of the operation (ibid).

Wohlfart reflected on the results of the series that the operation can be of much value but "great experience is required before one can single out the suitable cases and avoid those where the operation may do harm." He was of the opinion that risks with the operations seemed "relatively small" but added, "a greater danger is the possibility of producing mental invalids".

With the first results of the very first prefrontal lobotomies carried out in Sweden, he cautiously formulated what could be regarded as a message to the state mental hospital psychiatrists, the neurosurgeons and the general surgeons.

*Our knowledge of the innermost nature of this therapeutic method, its technical execution etc., is still too imperfect to enable us, with its aid, to venture on a general offensive against chronic cases of mental disorder" (ibid).*

### The early Beckomberga series

Not long after the first prefrontal lobotomies had begun at the Serafimer Hospital, the neurosurgeons, Gösta Norlén and Olof Sjövist, started to operate on patients from the State Mental Hospital at Beckomberga, Stockholm. The neurosurgeons, Frykholm, Lexell and Lundberg were also engaged in this series

The initial proposition for experimenting with psychosurgery in Sweden is indicated as originating from Dr Fritz Wiesel. Being a psychiatrist at Beckomberga he had, in the summer of 1942, suggested to Professor Herbert Olivecrona the performance of frontal lobotomy on patients suitable for the procedure. His proposal was not implemented until October 1944, when the operations commenced. Dr Fritz Wiesel presented the initial Beckomberga series at the 8th Congress of Scandinavian Psychiatrists in Copenhagen in 1946 (Wohlfahrt 1947).

Lobotomy in the initial two years in Sweden, 1944–1946 can be considered as the pioneer years, characterised by few operations and thorough pre-operative and post-operative documentation.

Psychosurgery was then rapidly introduced in state mental hospitals. Lillhagen, in the city of Gothenburg and Sidsjön State Mental Hospital in the city of Sundsvall adopted lobotomy in 1946 (Hedenberg 1947, Blomqvist & Börjesson 1951). The Umedalen State Mental Hospital followed in 1947 (Paper I, Paper II).

## **The technology is introduced**

### **Lobotomy Adopted at Sidsjön Mental Hospital**

In 1946, psychosurgery was introduced on a wider basis in Sweden when state mental hospitals adopted the technology. The Sidsjön State Mental Hospital then started to refer pre-frontal lobotomy candidates to the Sundsvall City Hospital (Sundsvalls lasarett) where general surgeons now practised pre-frontal lobotomies.

The professional transformation of the new technology led to a rapid growth in its practice. This transformation was followed by an increase in the mortality rate compared with that of the first pioneering prefrontal lobotomies. A rate of more than 10 % at Sidsjön and at the State Mental Hospital of Umedalen is found during the early introductory years. Approximately 4,500 mental patients in Sweden were operated on between 1944 and 1960.

Most of the patients had a diagnosis of schizophrenia but, as time passed, additional diagnoses such as idiocy, psychopathia and involuntional paranoia are found among those who were operated. A few cases of prefrontal lobotomy on children have been found during the project (Paper I).

### **Cognitive testing is tried**

In 1951 a young psychologist called Ulf Kragh from Lund, Sweden, started work at the Sidsjön State Mental Hospital to gain experience in his career as a clinical psychologist. With an early interest in the “body-mind” problem, and having recently written an extensive academic paper, Kragh was invited to Sidsjön to take up a position as clinical psychologist in 1951 (personal communication, Ulf Kragh March 26, 2003)

At Sidsjön he saw lobotomy candidates and patients who had been lobotomized.

Kragh carried out the various cognitive tests. As he recalls the situation, he had just a preliminary diagnosis to start with. He was also allowed to take part in the clinical conferences at the hospital.

It was a diverse group of patients that he tested: patients with acute schizophrenia, depressive patients and patients with anxiety states. The mental hospital doctors were positive concerning his tests but, as he remembers, not particularly interested.

Kragh comments; “I was able to inhibit the proposed lobotomy in some cases, in which the psychogenic connection was clearly accentuated.”

During the 2.5 month of tests, he became more and more interested in the personality aspects of the lobotomy patients, and he tested them for their short-term memory and their range of attention.

He was truly interested and fascinated by the various and intricate psychological complications behind their symptoms. The candidates for lobotomy were sent for his tests very soon after they had fallen ill. Due to this happening so soon, he found it relatively easy to analyze the factors provoking the psychic symptoms in the patient.

Kragh does not regard his tests as a project in today's terminology, so it was more of a way to obtain experience of the deeply disturbed psychiatric patients. His initial plan was also to use the data on 12–13 patients he tested in order to continue with a licentiate thesis in psychology, something which he did not fulfil.

He carefully gathered the data from his tests on the lobotomy patients he saw during 1951 at Sidsjön and he also made a strenuous effort to locate this data for the research of the author of this thesis but, unfortunately, it was not found.

The tests were carried out at a time when clinical psychology and psychologist appointments were rare in the state mental hospitals. His engagement may also represent an effort on the part of Sidsjön Hospital to adopt a modernized approach of mental care, searching for a more valid approach to the selection of patients for lobotomy operations.

It may be of some significance that the data collected by Kragh was never communicated to medical literature. Such psychological knowledge of the lobotomy candidates may have had a potential to promote more understanding of the practice of lobotomy in Sweden.

### The discharged lobotomy patients – three cases

In the autumn of 1949, a young student acting as a psychiatric social worker<sup>11</sup> at the Sidsjön State Mental Hospital, made a follow-up<sup>12</sup> of eight patients who had been lobotomized and discharged from the hospital. The follow-up was presented in a final paper of the student's psychiatric social work appointment in order to demonstrate the experience and knowledge gained.

The follow-up period for the eight patients was three years, except for two of them, one being operated on in 1946, the other in 1948. The selection of patients for the follow-up was based, not on strictly scientific standards, but on the unorthodox fact that the investigator had the possibility to reach these patients on her bicycle (research interview 2004)<sup>13</sup>!

The diagnosis of the patients was *insania praesensilis* for three of the cases, schizophrenia for one, psychosis per trauma mentale for one, dementia paralytica for one, psychopathy for one and, finally, imbecillitas+insania epileptica for one.

In order to demonstrate the results of the operation, as described by the investigator, three of the cases are described in a vignette below. Case presentations were condensed from the original report by the author of this thesis.

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<sup>11</sup> During an appointment, traditionally for a period of one or two semesters, the social work student worked under the guidance of a professional social worker. It was obligatory to present a final paper.

<sup>12</sup> From this follow-up, case presentations were condensed by the author of this present thesis.

<sup>13</sup> Research interview with Mrs. Inger Windebank, England July 29, 2004 and July 30, 2004. IW moved from Sweden in 1951 and continued as a professional social worker in England, starting with a position at the Maudsley Hospital, London. From 1962 she worked in a so-called Child Guidance Clinic in London. Before the research interview, Mrs IW had the opportunity to read through her report from 1949, *The Effect of the Lobotomy Operation on the Psyche and the Body* (Lobotomioperationens inverkan på psyke och kropp) which she had mislaid for a considerable period.

## CASE I

Female, widow, age 50+ at the time of intake, personal admittance 1946.

*Diagnosis:* Insania praesensilis.

*Heredity:* Father had “weak nerves”, aunt had been in a mental hospital. Patient had a normal personal development and was fit during childhood. Husband was a farmer. Since his death, the patient took over responsibility for the farm, supplementing the income by knitting. Operated on in 1945 for gallstones, afterwards susceptible to cancer, which was worrying her. Long-term problem with insomnia, but not until some years before admittance, which had caused her nervousness and worry. Patient was very afraid of a number of diseases, which could not be medically verified in a somatic hospital. At the time of intake, she had made a suicidal attempt by intoxication, which, she admitted, had also been tried earlier but interrupted and revealed to relatives.

*At intake:* Signs of deep-seated depression, patient is “low” and restrained, blaming herself, more serious symptoms develop, audible and visible hallucinations (creeping animals), refusal to eat, negativistic. Impossible to communicate with patient.

*Prefrontal lobotomy:* Five days postoperatively still “low”. No longer worried. Two weeks post-operatively, patient eats and drinks by herself. States that hallucinations have disappeared. Cannot recall details from the preoperative history. Sleeps well. Remembers having been tube-fed, but does not understand the refusal of food.

*One month postoperatively:* Discharged on probation to her home. To begin with, difficulties in being active. Soon gains capacity to take care of the household, cleaning, and milking two cows. Feels totally fit with the exception of occasional headaches. Still has some fear of animals. 3.5 months postoperatively, patient is discharged from hospital.

*Eight and a half month postoperatively:* Patient has a home visit by the Out-Patient Unit (Hjälperksamheten). Patient is doing fine at home. Keeps the household in order. Sleeping problems, but patient is reluctant to use prescribed medication for these problems. Good capacity for work. Doing hard work makes her tired.

*Three years postoperatively:* (Home visit by psychiatric social work student). Patient seems fully recovered. Patient relates about herself in a calm and relevant manner. She seems to have good judgement and is fully aware of her mental illness, as it were. She has no lack of initiative and she has no inertia. Talks about the small farm with two cows and a pig. She helps out during harvest, does all the washing of clothes and assists in all other heavy work without becoming tired. She has thus regained her working capacity. Fear and worries are gone. She mentions that a person related to her could hardly understand that the patient had been ill, something which now cannot be observed at all. Patient admits certain troubles. Sleeping is relatively problematic, but better than before. She has pains in her legs. The outstanding problem is obesity (+30 kg). Short-term memory is bad. While knitting, she must return to the instructions again and again. Fear of animals is totally gone.

*Investigator’s conclusion:* Without exaggeration, it must be understood that this patient has totally regained full psychiatric health. She has a few subjective problems, of which weight gain and bad memory are probably the result of the operation. Where sleeping problems are concerned, these may not necessarily be due to the operation, since they were observed already before the operation.

## CASE II

Female, married, age 55+.

*Diagnosis:* Insania praesentis

First admission, personal, in mental hospital at the age of 51+.

*Heredity:* No known heredity for mental disorders, 10/13 siblings. Married at young age.

Relation with husband good.

*Psychiatric history:* Since the age of six, bothered with pain from the legs and rheumatic pain in arms and legs. From the age of forty, complains of “burning” feeling in the body. Since then continuous pain. Condition progressively more serious in hospital with total paresis. In somatic hospital, some recovery, but relapse to the state of pain. At home, she had been in bed for long periods, acquired fear of dying. Much worried, tinnitus, sometimes sensations from genitalia. Patient is well orientated and gives adequate responses. Patient has thoughts “about something causing pressure in her brain”. Always complaining about the pain in her body, fatigue and perspiration. Patient requests permission to go home, since there are no changes in her condition.

*Mental hospital doctor, visits in 1947:* No changes in patient’s condition, rather the opposite. Continuously bothered with pains. Husband has spent a lot of money on her medication and visits to doctor. Wife has been in bed for almost a whole year. All work done by the husband in the household. Wife demonstrates more psychiatric symptoms, suspects neighbours of looking down on her. Patient becomes secluded, feeling of being irritated by the media.

*Prefrontal lobotomy:* Patient is persuaded to undergo a lobotomy operation in 1947. Preoperatively extremely difficult to care for. Filthy, disorientated, talks again and again of the same topic. Sleeping problems, continuously complaining of pains.

*14 days postoperatively:* Patient can now leave her bed and look after herself. She is also able to help out and to do some work. Restless, walks backwards and forwards. Laughs in an unmotivated manner.

*One month postoperatively:* Patient still maintains that she suffers from pain. But she stresses that she is satisfied with the operation, but that she feels no change from her previous condition. But it is found that her former feelings towards her neighbours are gone, as well as her paranoid ideas. She finds that her thoughts “wander about” more than before.

*3.5 months postoperatively:* Patient is discharged to home. Husband has reported positive changes in her condition. Outpatient Unit visits. Ever since her discharge, she has been taking care of the household, the home is neat and properly cared for. Husband states that “something magic” has happened. Wife is no more on medication, she has no hallucinations.

*2.5 years postoperatively:* Social work student on home visit. Following observations are made. Home is neat and properly cleaned. Patient states that homework amuses her. Likes cooking especially. She is unable to carry out the heavier work, such as window-cleaning, washing etc., but “... husband helps...”. Patient is no more afraid of meeting other people, she is no more worried by “neighbours’ eyes”. She is fond of travelling. Patient does not talk much and leaves the conversation to the husband. She laughs in an unmotivated manner and disrupts the conversation (between husband and the interviewer). She has good memory capacity. She still has pain but does not complain of it. Sleeping is quite normal. Patient has gained weight

(+36 kg), which bothers her. She states that sometimes she feels “dizzy”. A number of times she has lost motor control and has fallen to the floor and has been vomiting.

*Investigator’s conclusion:* On the negative side of this case, the weight gain must be accounted for, a certain listlessness, some dizziness and, to some extent, a languid, euphoric appearance. Although, according to her psychiatric history, this existed before the operation. The positive value of the operation is obviously more prominent (than what is not indicated, remark by author of thesis). What I would like to stress, in particular, is the immense relief for the husband after the operation.

### CASE III

Female, married, age 52+ at hospital intake, personal admission. Married for first time at age 23, due to pregnancy. Divorced after less than one year. Great difficulty in getting ex-husband to pay allowance. Problem in childhood to “separate thoughts” and leave thoughts behind. No problems in school. After school-years she had heard “voices”. Remarried. Husband unhealthy, a condition which affected their sexual performance (coitus interruptus). Patient had thoughts of guilt for the sexual life and she was forced to wash her hands after intercourse. She went to the church for forgiveness but in vain, since she found that they (the church) wanted her “to feel sinful”. Economic problems, she states, caused her to feel depressed. Husband states that the patient has a bad temper and that problems are due to her religious delusions. During the stay at the mental hospital she is calm and well organized but has recurrent crying spells. Patient claims obstetrical problems which need surgery. Patient’s somatic status is contra-indicative of shock treatment.

*Prefrontal lobotomy:* 1.5 months after admission. Some week postoperatively she is able to weave in the loom room. Patient is good-natured and communicative. She feels fit and considers that she could leave the hospital.

*Two months postoperatively:* Well orientated, able to recall her sickness period. Religious delusions gone, still thinks of cancer of the ovaries. No dizziness, feeling of fainting or headache. Patient seems debilitated, giggles and cries during conversation. Discharged on probation to her home.

*One year postoperatively:* Outpatient Unit visits. Formally in order, orientated. Answers adequately, but is suspicious and restrained. Status seems languidly euphoric with additional distrust and irritability. Some days she is better, according to the husband, but when things do not go her way, she becomes aroused and irritable. Patient denies hallucinations.

*1.5 years postoperatively:* Patient acts in a similar manner as during the previous out-patient home visit. When the patient understands that the investigator (the psychiatric social work student, author’s remark) represents the mental hospital, she becomes very upset and annoyed, her disappointment being directed at the husband. It is revealed that she is afraid of being admitted to the mental hospital again and she suspects that her husband took the initiative of inviting the investigator in order to have the patient re-admitted to the mental hospital. Patient’s suspiciousness becomes apparent. She is distrustful of everybody. Aggression is constant, which is clearly demonstrated during the visit. Husband comments on patient’s aggressive attitude, but he is of the opinion that it is not demonstrated as often as before, and not with the same intensity. Patient stresses that she is good at doing all kinds of work and that she would like to work elsewhere than in the household. Husband is reluctant to support

the patient's wish for other jobs, since he has experienced the fact that she leaves her work as soon as something does not go in her direction. Husband states that patient still has religious delusions and that she is beset by the church, the local police commissioner and the media.

*Somatic problems:* "Patient declares no pain, no sleeping problems. Husband declares that she complains of "heart pain" and that her sleep is varied. Patient has gained weight.

*Investigator's conclusion:* "In this case it looks as though the operation has failed in its purpose. But I am of the opinion, which must be observed, that there is no change for the worse in what must be regarded as being a rather too short period for a final evaluation of the result of the operation. If changes for the better may occur, I am not capable to judge whether a second operation is indicated. I would like to stress that Mrs NN takes care of the household to the full satisfaction of the husband and that her temper tantrums have diminished to some extent in both intensity and frequency. The latter must, of course, be a relief for the husband."

## **The clinical narrative**

The three cases presented above represent clinical narratives which are, to some extent, typical of lobotomy patients. What makes this report an exception from the typical clinical descriptions of lobotomy patients in the psychiatric records of the time, is that the observations of patients in their homes are made by a student of social work, a somewhat "fresh" observer within the otherwise "dry" clinical framework.

The descriptions have a divided focus, by way of letting both patients and their husbands give a lively depiction of the actual social and relational situation. The stories presented in this unpublished report in fact offer a deeper understanding of the lives of the discharged lobotomy patients in contrast to the clinical evaluations stating results of the outcome of a lobotomy on a scale such as the "minus/plus" scale used in the psychiatric hospitals (PAPER I).

The discharged lobotomy patients come to life, their shortcomings as a sequel of the operation are demonstrated and the voices of the husband or the neighbours are heard, which adds to our understanding of the post-operative life of the lobotomized patients.

The narratives presented here are regarded as examples of the construction of the lobotomized women. There is an evident gendered discourse in the narratives concerned with the depicting of the abilities, which a lobotomized woman still has as a "house-keeper" giving the best of service to the household and the husband.

The cases presented represent the early lobotomy cases from the Sidsjön State Mental Hospital. They may then be regarded as originating from the period of early optimism in the history of psychosurgery in Sweden. It must be considered also, that the cases in the unpublished report represent lobotomy cases that were regarded as being successful, still with the exception of Case II. Even with the positively evaluated cases in the follow-up, it is found that these patients demonstrated the side effects of lobotomy such as obesity, memory deficiency, dizziness and fainting, which must be regarded as signs of a frontal-lobe syndrome.

The follow-up cases presented by the social work student demonstrate that even the positively evaluated cases of lobotomies had a number of psychological, somatic and cognitive problems to cope with in their post-lobotomy lives.

No scientifically relevant studies of the long-time effects of lobotomy have been carried out in Sweden. It is too late now, since most of the early lobotomy patients are no longer alive.

## Lobotomy is evaluated at Umedalen

The Medical Superintendent and head of the female wards of Umedalen State Mental Hospital, Dr Gösta Eriksson, produced a special lobotomy file on the first 118 women who were lobotomized at this hospital (PAPER I).

It remains unclear as to why Eriksson ceased producing this clinical data at the 118th operation. The special file might have been compiled in an effort to carry on with more profound investigations of a larger group of patients operated on.

For the organisation of the special file, Eriksson classified data in five different columns, which represented basic clinical data such as the patient's name, marital status, occupation and diagnosis (*column 1*). He also described when the patient was transferred to the hospital, then he presented qualitative data, such as characterizations of patients' symptoms;

*Old schizophrenic, debuted in 1922. Lies at the moment in catatonic positions – or sits in bed with knees maximally tightened to her breast or sits in a similar position. She tears things up and she has a pool under her bed. She is negative and unsympathetic – sometimes uttering something that is not understandable” (column 2, lobotomy case #1)*

Eriksson then uses a parameter or a yardstick which he calls “aim of operation” (column 3). Regarding lobotomy Case # 1, he writes: “The treatment is meant to lessen her tension and by so doing to make her more manageable”. In this box Eriksson also fills in the result of the operation (PAPER I) by the use of a + (plus-sign) or a – (minus-sign).

The table below is compiled to illustrate the evaluation technique that was adopted.

*Evaluation<sup>14</sup> of outcome of prefrontal lobotomy of the first 101 females (N=101) from Umedalen State Mental Hospital operated on 1947–1949.*

| DIAGNOSIS                      | died       |             |             |             |            |             |            | TOT        |
|--------------------------------|------------|-------------|-------------|-------------|------------|-------------|------------|------------|
|                                |            | —           | +           | ++          | +++        | ++++        | +++++      |            |
| Schizophrenia                  | 5          | 13          | 12          | 39          | 1          | 11          | 3          | 84         |
| Oligophrenia+<br>schizophrenia | -          | 2           | -           | 4           | -          | 2           | -          | 8          |
| Oligophrenia                   | 4          | 2           | -           | -           | 1          | -           | -          | 7          |
| Insania praesenilis            | 1          | -           | -           | -           | -          | 1           | -          | 2          |
| nos. of pat.                   | <b>10</b>  | <b>17</b>   | <b>12</b>   | <b>43</b>   | <b>2</b>   | <b>14</b>   | <b>3</b>   | <b>101</b> |
| <b>% of N</b>                  | <b>9.9</b> | <b>16.8</b> | <b>11.8</b> | <b>42.6</b> | <b>2.0</b> | <b>13.8</b> | <b>3.0</b> |            |

<sup>14</sup> Symbols used to evaluate outcome were: (-) = No change, (+) = Some change but patient not moved to a better ward, (++) = Moved to a less unruly ward, (+++) = Moved to open care, (++++ = Sent home, and (+++++) = Able to work. Data has been obtained from the original clinical data from the archives at Umedalen State Mental Hospital.

Then follows (*column 4*), the name of the operator and the operation and finally, (*column 5*), he presents the patient preoperatively, which ward he/she is in, whether the patient has been discharged and (sometimes) the circumstances surrounding postoperative deaths are given, even quotes from post mortems can be found.

No definite consistency can be found in the data or a thoroughly predetermined plan for how to report data, such as follow-ups being made at any defined periods of time following the operation.

## The results were not published

The clinical data of the results of lobotomy at Umedalen were not presented in any of the Swedish or international medical journals. There is one exception, one single reference from 1958 at the very end of the prefrontal lobotomy era (Rettig 1958).

Rettig gives a short presentation of the catamnesis on 132 cases operated on (among them were patients diagnosed with propf-schizophrenia)<sup>15</sup>.

For this project Rettig's original data was requested in different ways but could not be found. Rettig presented his data in February 1958 before a limited group of physicians at a meeting of the members of Umeå Läkareklubb (Umeå Medical Association).

## Why were the results not published?

A conceivable explanation for the absence of research on the 771 prefrontal lobotomy operations carried out in Umeå might be the lack of an academic tradition. Research interest prevailed and was promoted in the larger cities with a medical school or a university, something that was far ahead for the city of Umeå in the 40s and 50s.

The internal clinical data presented on prefrontal lobotomy at Umedalen in 1947 onwards consists, from today's viewpoint, more of the rudiments of research. One has to be cautious with respect to this fact and avoid concluding that mental hospital doctors were unprofessional or indifferent.

Taking into consideration factors such as the situation of the overcrowded wards in Swedish mental hospitals on the whole, the work-load and the absence of a research unit or research division within the Swedish National Board of Health (Medicinalstyrelsen), it may be understood that psychiatric research was not prioritized.

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<sup>15</sup> The term "pfpofhebephrenia" was introduced by Emil Kraepelin (1856–1926) who considered it an early onset form of dementia praecox ("pfpof" literally means "grafted"). German and Soviet psychiatrists in the 1920s–1930s interpreted it as either a combination of schizophrenia and oligophrenia or as schizophrenia with early onset (personal communication 2004, Dr Boleslav Lichterman, neuroscience historian, St Petersburg).

## LOBOTOMY AS A CONGRESS TOPIC

There were four Congresses of Scandinavian Psychiatrists during the period of early psychosurgery in Scandinavia. The first Congress was held in Copenhagen in 1946, which was followed by meetings in Helsinki 1949, Stockholm 1952 and Oslo 1955.

As a rule, the Congress reports were very detailed. If the spouses of the speakers took part, we are informed of their social programme. If a presentation evoked discussions or critical comments from a panel or from the floor, this is all well documented.

The Congresses are viewed as the arena in which the professional discourse on the new technology of psychosurgery is visible. The Congress reports have been used as a way of detecting the discourse. The main actors presenting something on psychosurgery were identified and their papers were analyzed. The certain view of a proponent or an opponent of psychosurgery was considered with the purpose of detecting changes over time within the psychiatric profession relating to clinical details, such as indications, mortality, evaluation and problems of the implementation of technology.

### The 1946 Congress

The 1946 Congress had six predetermined topics, number IV being labelled “Psychiatric therapy, especially leucotomy and shock therapy”. It was introduced by Dr Broager of Denmark, Dr Wohlfahrt of Sweden and Dr Dedichen of Norway (Wohlfahrt 1947).

In his introduction, Broager points to the greatest dangers of frontal lobotomy, which are;

- ...haemorrhages caused by the lesion of large vessels,
- ...opening of the lateral ventricle, and if
- ...incisions are made too far back.

Broager states that they (incisions made too far back in the grey matter) may cause; “...a stupefied, demented condition which may lead to death” (of a patient).

Broager refers to 90 patients lobotomized at the neurosurgical department of the Rigshospital in Denmark, of which five died due to the operation, two from haemorrhages into the opened lateral ventricle and three because of incisions being made too far back.

The mortality rate is said to be in the range of one to six percent, the lowest figure being in the large material. According to Broager, the postoperative mortality (6 %) is higher prior to the time when the surgeon had become accustomed to the technique (ibid).

### The psychiatric views on leucotomy

Snorre Wohlfahrt, a Swedish psychiatrist, presented the second introductory lecture on the psychosurgery theme, “Psychiatric views on the problem of leucotomy”. He talked about the indications of lobotomy used when other treatments, such as insulin shock or ECT, had been tried without results. His broad conclusion on the effects of lobotomy is that it is in a relative proportion to the grade of emotional tension within the patient.

Apathetic patients should therefore not be considered as candidates for lobotomy. Wohlfahrt refers to the well-known statement by Walter Freeman that the “burnt-out schizophrenic” behaves in much the same way with or without the frontal lobes). He is of the opinion that it is not the psychiatric disease entities that, as such, are suitable or not for an operation but “instead, “certain mental syndromes” (Wohlfahrt 1947).

Here he referred to “the chronic depressions, those which tend perpetually to recur or remain stationary for years, “...(they) are common during the involuntional years” and these he finds; “...include a type in which the melancholy mood is closely connected with continual brooding on certain stereotyped, morbid ideas”. Wohlfahrt finds that if shock treatment did not work in these cases;

*...there will be good reason to contemplate leucotomy, which, according to Anglo-Saxon judges, has led to improvement in about two-thirds of the cases.*

He also mentions leucotomy on patients diagnosed with chronic compulsive neurosis, but these operations are few so far. In an example from his own clinical experience, Wohlfahrt describes a patient with a pathological picture dominated by “neurotic, hypochondriacal intestinal disorders”.

This educated woman, 43 years of age, had for nearly five years been “incessantly whining” about her intestinal organs, she had a headache, incurable insomnia etc. She had ruined herself by consulting many different general practitioners and nerve specialists. Since she had had a leucotomy, two months after the operation; “She had recovered her spirits and was managing, single-handed, all the household affairs in the family’s eight-room villa” (Wohlfahrt 1947).

## The patient diagnosed with schizophrenia

Wohlfahrt then reflected on the results of leucotomy regarding patients with schizophrenia. He stated that “Leucotomy cannot strike at the root of the disease, we must rest content if it enables us to mitigate some of its symptoms...”. He concluded, “It is distinctly hazardous to leucotomize schizophrenics”. He is also sceptical concerning the group consisting of the mentally handicapped; “If one operates on an imbecile or an individual who is organically demented, one must not expect miracles” (ibid)

It is found from Wohlfahrt’s introductory lecture at the 1946 Congress that he was one of the Swedish psychiatrists who, in writing and in his communications with the Scandinavian community of academically and clinically engaged psychiatrists, critically articulated against an excessively optimistic view of the perspective of the method.

He also questioned how such positive statements could be made on its effectiveness when taking into consideration findings made on the extensive variations of the incisions made by different psychosurgeons (Stjernberg 1947).

## The 1949 Congress

The 9th Congress of Scandinavian Psychiatrists was held in 1949 in Helsinki (Borgstöm 1951). In the introductory lecture, Dr Ørnulv Ødegård from Norway stated that 55 of the 87 Scandinavian state mental hospitals now practiced psychosurgery. He then compared the actual status of psychosurgery to that of the 1946 Congress, when only 19 hospitals had

adopted the method. In growing numbers then, mental hospitals had included psychosurgery with the other methods available in the mental hospitals (Ødegård 1951).

Ødegård observed that the Scandinavian countries now had conformed with the Anglo-Saxon countries on psychosurgery, which he contrasted to countries like Austria, France, Germany, Holland and Switzerland, which were restrictive in the use of prefrontal lobotomy.

As an example of the reluctance or resistance towards the technology, he referred to a psychoanalyst or a psycho-dynamically orientated psychiatrist who had “difficulties in accepting a method so strongly founded on clinical empiricism” (ibid). He was also of the opinion that doctors were restrained by the commitment to the Hippocratic oath: Nil noscere (Do no harm). They felt obliged, he emphasised, to comply with this oath with respect to religious and ethical values. Ødegård obviously had a strong conviction, which he liked to share with the visiting psychiatrists in 1949;

*It is to be observed that contraindications (to psychosurgery) obviously seem to be most important to doctors who either have minimum contact or no contact at all with the mentally ill or who work in clinics with the less mentally disturbed, while doctors who are in daily contact with these patients are more inclined to let the urgency of the situation overshadow any operating doubts” (ibid).*

Dr Ødegård concluded his lecture by briefly summarising that he had observed exaggerated optimism in some of the reports concerned with the method in different publications. He went on to focus on the indications for lobotomy and mentioned two extreme cases: one was a colleague in the Netherlands who “was unable to find more than 13 patients suitable for the operation in a mental hospital with 1,500 patients”. The second extreme he mentioned was the use of lobotomy on children diagnosed as suffering from schizophrenia (ibid).

### Wohlfahrt’s caution

It can be understood from the congress document that no more discussions were reported on. The rhetorical questions posed had no answers. We are thus unable to gain knowledge of how the different viewpoints given by different presenters on lobotomy affected the psychiatrists who were the listeners at the congresses.

The tone in which Wohlfahrt put forward his sceptical viewpoints was fairly restricted.

It can be of interest to note that Dr Wohlfahrt’s cautious criticism was obviously not a particular challenge to the Congress participants.

From the Congress reports of 1952 and 1955, there seems to be decreasing interest in psychosurgery. A few papers were presented during these years and no certain optimistic or sceptical attitudes towards the topic are to be found.

This may indicate that psychosurgery, as represented by the pre-frontal lobotomy technique, is in the process of being abandoned and regarded, more so, as being obsolete (PAPER II).

### Mortality decreased in larger series

The rate of postoperative mortality for early psychosurgery in Sweden appeared to be much lower in the medical literature than the figures presented at the 8th Congress of Psychiatrists in 1946.

Dr Ivan Blomqvist presented the results of 32 lobotomy cases from the Sidsjön mental hospital where patients had been operated on at the surgical department of Sundsvall City Hospital. The post-operative mortality rate was high and four of the 32 patients, (12,5%), died (Wohlfahrt 1947).

In 1951 the results of the post-operative deaths of the then 131 lobotomy cases in Sundsvall, mortality was presented. The post-operative mortality now had decreased to five percent (Blomqvist 1951).

At the 1946 Congress, Dr Ivan Blomqvist, who reported on the first 32 cases of lobotomy, strongly recommended in his concluding remarks the services of “a surgeon skilled in the neurosurgical speciality” but he stated that “no such surgeon was available.”

In the subsequent discussion of these 32 cases, Dr Snorre Wohlfahrt, Stockholm, touched on the question of postoperative mortality. He mentioned something that he regarded to be important before the performance of lobotomies, namely – in all cases – to use encephalography to define the form and position of the forward ventricular horns (ibid).

Wohlfahrt asked: How could the rate of mortality be lowered?

He had no definite answer, but referred to McKissock (who used the method of cortical undercutting) who had operated on 540 patients with a mortality rate of two percent. Wohlfahrt, who had visited McKissock, had been able to share his experience.

McKissock's mortality rate, as Wohlfahrt was informed, was two percent in the early and later part of the series. Wohlfahrt also reported that McKissock was of the opinion that, with more experience of the technique, operative risks would not further be reduced. Finally, in Wohlfahrt's discussion of the risks of psychosurgery he had elaborated on this matter and he asked the Scandinavian psychiatrists; (rhetorically) “Where and who should practice psychosurgery?” (ibid).

# THE MODERNISATION OF SURGICAL TECHNOLOGY

In 1950, Olof Sjöqvist, a neurosurgeon at the Södersjukhuset Hospital, had abandoned the use of the (older) closed technique ad modum Freeman and Watts. He preferred the modified, half closed method in which he was able to employ a silver clamp to use electric cauterization to stop fatal haemorrhages.

He had succeeded in decreasing the postoperative mortality of lobotomy to less than one per cent. This means that there was a decrease in mortality with the half closed method compared to the traditional (Freeman/Watts) prefrontal lobotomy in the range of approximately one to ten (Sjöqvist 1955).

## **The new demands on psychosurgery**

The refinement of surgical methods in psychosurgery, of course, also made demands on its practice. The more sophisticated approaches coming into practice required skilled neurosurgeons and safe surgical settings. Prefrontal lobotomy in 1951, having been widely used in Sweden for the short period of four years, may be described as becoming obsolete.

In the early 1950s there was mounting controversy in Sweden on the question of who should operate on the mentally ill, the general surgeon in the smaller rural hospitals, situated geographically closer to the state mental hospitals, or the neurosurgical clinics (as a rule, with the best technique applied) in the larger centres of the country.

The conflict is reflected on in the professional discourse, being represented in the Scandinavian Congresses of Psychiatrists as well as in the Journal of the Swedish Medical Association (Läkartidningen).

The controversy and the discourse reflects the two extremes of opinions on the question; 1) the general surgeon, if he takes an interest in these operations, should be able to practice psychosurgery and 2) it is natural, when the techniques have become more precise and in need of more delicate devices, that the neurosurgeon performs psychosurgery. Psychosurgery was in the midst of competing professional interest.

By the time of the introduction of the safer methods, psychosurgery in the form of prefrontal lobotomy had already become a “golden standard” in some state mental hospitals in Sweden.

The two most recently built, Umedalen (1934) and Sidsjön (1943), in fact seem to have been the most “lobotomy-minded” hospitals, taking into consideration the number of operations performed at these two hospitals (Paper I).

## **The neurosurgeons or the general surgeons?**

Psychosurgery in the pioneering years of its history in Sweden, 1944–1946, was a specialised procedure used by the neurosurgeons in Stockholm. Then came the introduction of psychosurgery to the mental hospitals from about 1946, when the prefrontal lobotomy technology

was undertaken by the general surgeons for years to come. Parallel with this it was regarded, among the neurosurgeons again, that psychosurgery (with the new refinements of the technology) was applicable only as a neurosurgical speciality.

This can be reflected in the planning process for the expansion of the neurosurgical speciality in Sweden, which started in the middle of the 1940s. Neurosurgery, at the time, was a narrow speciality and the service was far from fully covering many geographical areas in the peripheries of the largest cities.

Psychosurgery in relation to the status and resources on the whole in Sweden has been touched on by Frykholm, a neurosurgeon, (Frykholm 1946). Being one of the pioneers of lobotomy, he speculated on the future of Swedish psychosurgery in *Läkartidningen*. The year is 1946.

*Nowadays there is also, within mental care, a great need for neurosurgical expertise to carry out lobotomies etc. This clientele has not been considered in the calculations, (the expansion of Swedish neurosurgery service, authors' remark) but it must be regarded as being so large, that in the future it will be motivated to employ special neurosurgeons in the state mental hospitals. If, depending on the extent to which neurosurgeons will be placed round the country, for a start, they should be willing to operate on the mentally ill. It is advisable to carry out these operations within the facilities of the mental hospitals. They should therefore require the necessary instruments and to set up the surgical wards that are needed.*

Frykholm's view could be seen as a passing on of the question which had arisen at a time when old technology (prefrontal lobotomy) collided with the more secure and new advancements within neurosurgery.

Interestingly, the view of Frykholm, was soon challenged by a somaticist, Dr Erik Ask-Upmark in the *Journal of the Swedish Medical Association (Läkartidningen)*, (Ask-Upmark 1946).

Ask-Upmark is unspecific in his polemic while he does not target specifically the fact that general surgeons, starting in Sundsvall, then in Umeå, were carrying out prefrontal lobotomies. But, his distinct drawing of a boundary line between the surgical tasks that depend on the neurosurgeon or the general surgeon, is indeed applicable when it comes to this question related to psychosurgery.

Even if Ask-Upmark argues on a general basis, it is conceivable to conclude that he had knowledge of the fact that general surgeons around the country had become active in psychosurgery operations. In the argument directed at a practice where the general surgeon takes over psychosurgery from the neurosurgeon, Upmark uses the words of Bailey (a world-wide recognised neurosurgeon), which he quoted:

*The general surgeon is handicapped not only by a lack of knowledge but also by a lack of respect for the brain tissue. To the neurologist, each cell and each fibre is sacred. With full knowledge of the disastrous effects, which may result from his activities, he handles the brain with infinite care.*

Ask-Upmark identifies a sharp demarcation line between neurosurgery and general surgery. His message to Frykholm is quite clear. Although imprecise, it still understates that the general surgeons should refrain from carrying out prefrontal lobotomies (ibid).

## THE MENTAL HOSPITAL VIEW ON LOBOTOMY

These early findings of a controversy among the professionals indicate that psychosurgery as a technology in itself implied concern at the transformation level. Medical superintendents in Sundsvall and Umeå, in close collaboration with general surgeons, followed a path, which they regarded as being an opportunity for a general surgeon to perform prefrontal lobotomies.

We witness a transformation of the new technology where psychosurgery leaves the speciality of neurosurgery and is taken over by general surgeons in less well-equipped surgical settings in rural hospitals. The need of having lobotomies carried out in the state mental hospital overshadowed the intriguing questions posed on the insecurity of entering such a path.

The general surgeons and the psychiatrists at Sidsjön and Umedalen were obviously not seeing any problems in having operations carried out in the general hospital, even though they were aware of the insecurity of psychosurgical interventions being made in the smaller surgical departments of city hospitals.

In the primary report on the first lobotomies at Sidsjön, psychiatrists argued (Blomquist & Börjesson 1951);

*It would naturally be ideal if the operations were always to be carried out by neurosurgeons, with respect to both the treatment of complications that could occur and the technical variations and new methods which are already being tried out to a great extent. However, since this is impractical in Sweden for the time being due to the shortage of neurosurgeons, then general surgeons should show interest in this branch of neurosurgery.*

## ONE BLEW THE WHISTLE

In 1951, on January 25, a sensational article was published on the first page of the largest Swedish national newspaper, Dagens Nyheter, presenting the role of the governmental authority, Medicinalstyrelsen (The Swedish National Board of Health) relating to the practice of psychosurgery in Sweden (DN 1951).

One of the Chief Inspectors of the Board has shared information with Dagens Nyheter that a mental hospital doctor of the second grade, at the State Mental Hospital in Nyköping, has “accused the hospital” concerning an excessively high postoperative mortality rate lately. It was revealed that the doctor had informed that six out of 13 patients operated on had died.

He urged that prefrontal lobotomy on older patients was too risky and, according to DN, he had suggested that more “human consideration” than “scientific consideration” ought to be practised in the processes of deciding which patient to operate on (ibid).

This whistle-blowing was followed by a report of his actions by the Superintendent to the Board of Health. The superintendent reported that the doctor “has refused to apply for time off from work” and that he had also suffered from “senile inefficiency” and that he is now unable to “fulfil his duties as employee”(ibid).

Following these quite sensational facts, DN presented even more interesting news, which they received from the Board of Health.

The Board had initiated plans to have a Congress by the end of February/beginning of March 1951, jointly with “vetenskapsråden” (scientific advisers within the Board of Health) to “try to gain consensus on criteria for operations and their indications.” Inspector Segnestam of the Board is said to have reported;

It is not the intention of the Board to give directions, but it has to ensure that the treatment given is in accordance with scientifically proved methods.

The Inspector also commented that extensive statistics were available showing relatively good results from psychosurgery, but also, that it takes time to make postoperative follow ups (ibid).

### **Congress without media attention**

The Congress on Psychosurgery at the governmental level was held, but there are no reports in the media on the results and discussions at the announced Congress.

It remains unclear why there were no indications in the media of what was said during the Congress. A conceivable reason may be that the Congress was an internal affair and, due to that, journalists were not allowed to cover it.

The documents associated with the Congress were found in the National Archive (Riksarkivet) they were analyzed and presented here (PAPER IV).

## PSYCHOSURGERY AND CENTRALISATION

The urge to centralise psychosurgery in Sweden was obviously a difficult project. In 1951, two years after the Board of Health held their Congress on Psychosurgery where the topic was discussed, there were still no signs of centralisation.

Dr Olof Sjöquist, a neurosurgeon, who years earlier had ceased the use of the prefrontal lobotomy procedure *ad modum* Freeman/Watts and taken up partial lobotomy (cortical undercutting) into practice, was a reminder of the thoughts of centralisation. From a report in the Stockholm newspaper, *Svenska Dagbladet*, 28th of November 1953, it is understood that centralisation was still not realized. In the article, Dr. Sjöqvist is referred to as stating that “the coming expansion of psychosurgery in Sweden should be in the hands of the skilled neurosurgeons”, and that such a “national centre for psychosurgery must have an important mission to fill”.

The neurosurgical clinics in Stockholm had access to the resources of well equipped surgical theatres and had the neurosurgeons with the most current knowledge of the new methods. They had a tradition of making the necessary follow-up studies on psychosurgery. They were the spokesmen of the centralisation of psychosurgery.

So, in conclusion, neurosurgeons claiming the sole jurisdiction of psychosurgical procedures and demanding centralisation were also in fact the advocates of phasing out the obsolete procedure of prefrontal lobotomy. Had the project gained acceptance, it would thus have made possible the application of more sophisticated methods. Prefrontal lobotomy, which had been burdened by both serious adverse effects and a high rate of mortality, might have been outdated much earlier in Sweden if the Board of Health had managed to fulfil the proposals from the neurosurgical side.

## PSYCHOSURGERY IN SCANDINAVIA

Lobotomy was also practiced in the other Scandinavian countries. In Norway they started in 1941, in Denmark and Finland 1944 and 1946.

**Table.** Lobotomies in Scandinavia 1945–1960

| Country             | Year reviewed | Nos. of operations | Source           |
|---------------------|---------------|--------------------|------------------|
| Sweden              | 1944–1960     | 4.406              | Ögren/Sandlund * |
| Denmark             | 1945–1960     | 3 567              | Tranøy **        |
| Norway              | 1945–1960     | 2 591              | Tranøy***        |
| Finland             | 1946–1958     | 1 435              | Vataja****       |
| <b>TOTAL 11 999</b> |               |                    |                  |

\*Ögren K, Sandlund M.: Psychosurgery in Sweden in 1944-1964 *J Hist Neurosci* 14;(4):353-367,2005 \*\* Tranøy J: Lobotomi, i Skandinavisk psykiatri (Lobotomy in Scandinavian Psychiatry) KS-serien nr 1-92, Institutt for kriminologi og straffrett (Institute of Criminology and penal law, University of Oslo, Norway) and in *The Journal of Mind and Behaviour* 1996;17:1-20

\*\*\* ibid. \*\*\*\* Vataja, R, personal communication (January 18, 2000)and Vataja. R / Lobotomia, Taustatietoa ja selvitys leikatuista potilaista Soumessä 1946-1969, (Lobotomy, Background information and report on the Finnish patients 1946-1969) Helsinki : Stakes, 21/1997

The official figures concerning the number of inhabitants in the Scandinavian countries in 1950 were: Sweden 7 million, Finland 4 million, Norway 3.2 million and Denmark 4.2 million. From the table above, the number of lobotomies was divided by the number of inhabitants for the baseline year of 1950 in order to obtain a tentative relationship for a comparison of lobotomies per capita.

Figures show: Norway = 0.0008, Denmark = 0.0008, Sweden = 0.0006 and Finland = 0.0003.

Thus, the calculated relationship is rather consistent with the exception of Finland, where the figure is half that of Sweden.

### Lobotomy in Finland

An estimate by Vataja (Vataja 1997)<sup>16</sup> stated that 1,435 lobotomies were performed in Finland between 1946 and 1969. In the 1950s, operating theatres were built in peripheral mental hospitals and neurosurgeons from Helsinki travelled around the country during week-ends to operate. Patients were mostly diagnosed with schizophrenia and the most important indications were restlessness and florid psychosis or aggressiveness (Vataja 1998, personal communication).

<sup>16</sup> Lobotomia, Taustatietoa ja selvitys leikatuista potilaista Soumessä 1946–1969, Risto Vataja 21/1997

Kellikoski Hospital and Törnävä Hospital also practised lobotomy. The technical approach to psychosurgery was usually orbital undercutting. In Kellikoski Hospital, a clinical follow-up was made on the outcome of the operations. 25 % of the cases were regarded as “clearly improved”, 43 % worse or fatal and 10% developed epilepsy. The overall mortality was 6%. (ibid.)

Vataja suggests that one possible reason as to why Finland had a relatively limited interest in psychosurgery was the fact that the country was much involved in World War II and neurosurgeons were fully engaged in operating wounded war veterans. Early psychosurgery in Finland was at its peak in 1950–1958 (ibid.)

The question of compensation has been on the political agenda in Finland, but the Ministry of Health and Social Affairs decided not to provide compensation, since they were afraid that other patient groups would also demand compensation<sup>17</sup>.

## Lobotomy in Norway

The very first lobotomies in Scandinavia are documented from Norway by Ødegård (Ødegård 1947). The first publication of results of the operation was issued in 1948 (Knudsen C.L 1948)<sup>18</sup>. In the research of the practice of lobotomy in Norway Tranøy (1991) found that a minimum of 2500 lobotomies were performed in Norway representing an exception compared with other Scandinavian countries with respect to the technical performance of psychosurgery, since the transorbital lobotomy approach was tried out in the country.

85 patients were operated on with the transorbital lobotomy method between 1953 and 1955 in with the aim of comparing the effectiveness of this method compared with the prefrontal lobotomy technique. The two youngest patients in the series were a boy of 14 and a girl of 15 (Rimestad 1956).

Twelve patients were operated on each operation day by the same surgeon. The time for one operation was as short as 10 minutes. This should be compared with four patients that could be operated in one day with the traditional prefrontal lobotomy.

Patients were anaesthetised with ECT. There were two operative deaths. In the summary of the report the author states; “...The numbers, however, are small and only permit a tentative conclusion...that transorbital leucotomy is just as effective as prefrontal lobotomy (ibid).

The author summarized the advantages of the transorbital method instead of a pre-frontal lobotomy; the operation is less time-consuming, the risk of complications “should be less”, the operation is less invasive and gives few or no undesired personality changes, patients are less exhausted by the operation, fewer staff are needed for the operation, fewer staff are needed in after-care, no scars are visible after the operation, and women do not need to have their hair shaved off (ibid).

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<sup>17</sup> Personal communication: Dr Ilka Taipale, Helsingfors, Finland.

<sup>18</sup> Levkotomierfaringer ved Gaustad sykehus og dr. Dedichens privatklinik/ Knudsen( Experiences from leucotomy at the Gaustad Mental Hospital and the private clinic of Dr Dedichen) Christian Lohne, Nord.Med 1948:40:1821–1824.

## Lobotomy in Denmark

It is estimated that 3,500 lobotomies have been carried out. Most procedures were performed at the Rigshospitalet in Copenhagen. (Tranøy, 1991). A review of the very early prefrontal lobotomies at the hospital has been presented. This early series covers a period from December 1945 to November 1946 on a group of 43 female patients from the Kvindehospital (Female Hospital) of St Hans Hospital and operations carried out at the Neurosurgical Department of the Rigshospital.

Three of the six patients diagnosed with manic-depressive psychosis could be discharged about six months postoperatively. In two of the groups the condition was unchanged and in one it was aggravated. Of the 34 patients operated on, with a diagnosis of schizophrenia, eleven could be termed “much improved”, eight could be termed “improved” and fifteen were unchanged. No deaths occurred. Given the “absolutely bad prognosis”, the author concluded that the results must be; “regarded as satisfactory...” (Ellebjerger, 1948)<sup>19</sup>.

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<sup>19</sup> Frontal lobotomi ved kroniske psykoser (Frontal lobotomy in chronic psychoses/Ellebjerger E/Hospitalstidene Danmark 1948)

# NORWAY COMPENSATED ”LOBOTOMY VICTIMS”

In Norway a governmental investigation of the practice of psychosurgery has been made. It was presented in 1992 and “victims” of lobotomy in Norway were given an economic compensation (NOU 1992:25).

One reason for the investigation has been suggested as aimed at the media impact for this so called *Ex Gratia* compensation.

*Because of media reports that certain psychiatrists in Norway had practiced lobotomy in a way that could not be ethically or legally defended, the Government appointed a committee to examine lobotomy practice in Norway ...operative mortality during the first years of the practice was 27 % (Hermerèn & Holm 1995) p. 316.*

It is stated too, that the Committee “...found reason to criticize physicians because they had not taken the high operative mortality seriously”.

## **The ethical examination**

For the Norwegian governmental investigation, a group of psychiatrists was appointed to examine the ethical issues of the Norwegian practice of psychosurgery. They commented that the rate of postoperative mortality (32.1%) – even from the viewpoint of medical practitioners at the time – would have led to an understanding that the rationale for lobotomy should have fallen and that lobotomy should have been abandoned. The investigation reached to the conclusion that the mortality rate, over time, was 1–6 % in Norway (NOU 1992:25).

The retrospective ethical survey of psychosurgery is unusual because it includes a good portion of subjective factors, in some respect even to condemn former psychiatric colleges.

From the lobotomy records the investigators decided in the criteria to be used. By using the criteria an evaluation was made. The criteria for unsatisfactory ethical conduct were; a patient being operated on in their childhood and operations had been carried on patients without them having been treated with all other possible, non-surgical methods.

The findings were sensational in some respects because in a series with a post-operative mortality rate of 32.1 %, most of the operations had been performed by a certain surgeon.<sup>20</sup>

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<sup>20</sup> The Norwegian investigation is interesting from the point of view of presentations of cases in which the group found poor ethical considerations underlying a decision to operate. Of 319 cases 27.6% were regarded as “ethically insecure”, 8.6 % being “clearly ethically weak”. A man, 35 years old, diagnosed with schizophrenia was operated on within the facilities of the Gaustad State Mental Hospital. This, the very first psychosurgical operation carried at Gaustad had, according to the evaluation, a clearly ethical weakness due to the fact that “Firstly, this type of intracranial surgery was made on a psychiatric patient without optimal surgical resources, without the possibility of using an electric cauterizing device to stop haemorrhages, something that would have been used in pioneering surgery. This responsibility was in the hands of both the operator, Dr Torkildsen, and the director (of Gaustad) Ødegård. Secondly, a description of the psychiatric status of the patient is missing for the two years prior to the operation and finally, consent to the operation is missing (translation by the author from NOU 1992:25, page 80).

Dr Einar Kringlen, one of the investigators, comments on the investigation;

*We discussed within the group and decided with a reasonable unity on the criteria in a definition that was ethically defensible with respect to symptoms of the patients, their social functioning, their age and the chances of getting better, having in mind our understanding of the knowledge at that time. Of course, our method was subjective; other researchers would have used different criteria for their conclusion* (personal communication Kringlen 1999).

Kringlen, when reflecting of the rate of postoperative mortality in Norway, also comments: “It is difficult to understand how they accepted such a high rate of mortality”. But, again, it must be viewed in the perspective of history. Mortality at Gaustad (the State mental hospital in Oslo) was extremely high but this has been blamed on one neurosurgeon who was not professionally good enough and who did not pay sufficient attention to the haemorrhages (ibid).

There have been political proposals in Sweden to investigate lobotomy and to compensate the “lobotomy victims” but a political majority in the Swedish Parliament voted against the proposal. In Sweden the motive not to investigate officially the practice of early psychosurgery has been that lobotomy, as it were, was regarded as being based on “science and approved methods”.

## PSYCHOSURGERY IN THE ANNUAL REPORTS

In the following quotes from the annual reports from state mental hospitals to the Board of Health, the views of the superintendents and reporting on psychosurgery are demonstrated (The National Archives, Stockholm).

### 1948

*The Psychiatric Hospital* (Psykiatriska sjukhuset), Stockholm. Operations performed to quite a large extent. "...in many cases, patients suffer from more serious consequences from the operations and more frequently than has been assumed. Still, the patient profits in such a way that the treatment can be justified as an ultimate refuge."

*Ulleråker Hospital*, Uppsala. Seven women were operated on with prefrontal lobotomy. Two were improved, five unimproved.

*Sundby Hospital*, Strängnäs. "...altogether nine cases, old, unruly schizophrenics, were operated on. Of these, one died in connection with the operation. Results regarding the rest are not particularly encouraging, namely; one case being much improved and discharged from hospital, one case had some change for the better and six cases showed status quo or became worse."

*S:ta Anna Hospital*, Nyköping. Nine men and fourteen women were operated on. "It is too early to reflect on the results. But it is obvious that in several cases patients became more easily managed" / Superintendent Otto Brundin/

*Birgitta Hospital*, Vadstena. Overburden is 15 %. 21 men/10 women operated on... "...lobotomies led to a pacification of the most unruly ward...changes have otherwise been rather modest."

*S:t Sigfrid Hospital*. "Due to the lack of suitable surgeons, no lobotomies have been carried out during the year. While a neurosurgical department has opened in Lund, a preliminary agreement was made on the referring of one patient or another for surgery."

*Sidsjön Hospital*, Sundsvall. 43 men/49 women were operated (whereof two re-operations) "...patients' improvements are more of a technically manageable nature."

### 1950

*The Psychiatric Hospital*, Stockholm. Psychosurgical treatment has been carried out in 26 cases. Besides the methods earlier practiced, total or partial lobotomy, one

cortical undercutting procedure has been performed. This method seems to give the required results without the serious side effects that used to be the case, especially with total lobotomy. The expectations made on this type of brain surgery therapy may hardly have been fulfilled. Above all, the disabling side effects seem not to have been sufficiently considered. They should more often be taken into consideration when weighing of the pros and cons of the method.

*Sundby Hospital.* One lobotomy carried out. "Technical difficulties, and the doubtful value of the operation, has reduced interest in it." /Sigurd Jarl, Superintendent/

*Restads Hospital,* Jönköping. 16 lobotomies, one improved and discharged, five were better in hospital, four were to some degree better in hospital, five were unimproved, one died.

*Mariebergs Hospital.* 44 patients were lobotomised at the Kristinehamn Hospital by T Björkroth. Mainly chronically ill and unruly patients, seven have been discharged, one was sent to the family care programme, 21 were improved in the way of becoming more calm, more easily managed but still in need of hospital care, 14 must be regarded as unchanged and one died of meningitis 14 days post-operatively/N Wennerholm, Superintendent

*Sidsjöns Hospital,* Sundsvall. At the end of 1950, 393 lobotomies had been carried out since 1946

## 1951

*Gådeå Hospital,* Härnösand. Two patients were operated on at their own request. The operator was Fernström. "These were two men, 32 years old, suffering from schizophrenia sometimes with serious anxiety and hallucinations. Six months post-operatively there are no significant subjective or objective changes for the better. (Dr A Kerrolf)

*S:t Sigfrid Hospital.* "A few lobotomies have been performed at the Neurosurgical Department in the hospital of Lund. There was a long wait and it was nearly impossible without reminding the hospital to obtain access for operations. While neurosurgeons have stated that standard lobotomies should not be carried out by general surgeons, an effort for such operations to be performed at the Växjö hospital has not been carried out. Before the operations were made, in all cases, consent was required from those closely related to the patient.

*Sidsjön Hospital,* Sundsvall. "The numbers of lobotomies have decreased ... patients suitable have already been operated on... it is difficult for the Sundsvall City Hospital to manage to carry out all the operations..... this is unfortunate ...on the other hand psychosurgery has reached a phase where more differentiated psychosurgical methods suitable for the less serious cases should be considered...these can possibly not be operated on unless psychosurgery (in Sweden) becomes centralised...the number of operations is now 449" (Einar Osterman, Superintendent)

*Beckomberga Hospital*, Stockholm. A few lobotomies were performed. "...results not very encouraging but patients became somewhat calmer. It is my opinion, as I have stated before, that one should be conservative concerning these operations on the brain, while you cannot escape the fact that they are followed by some defects which are impossible to repair. (Dr Eric Abrahamsson)

*S:t Sigfrid Hospital*. "...the question of lobotomy seems to be unsolvable while neurosurgeons maintain their opinion that they, as a speciality, should carry out these operations on the brain ...only five operations on patients from the female ward were performed... the Växjö hospital (still) unwilling to lobotomize...

*S:ta Anna Hospital*, Nyköping. "Lobotomies have been performed as in the years before with good results" (Otto Brundin, Superintendent).

*Sundby Hospital*. No lobotomies were performed due to the doubtful results from earlier years.

## 1953

*Ryhovs Hospital*, Jönköping. 37 lobotomies were performed, mostly patients with chronic schizophrenia. Results so good that a wider use of the method is desirable... It is urgently needed for methods of a more differentiated kind to be introduced to make possible operations on other patients than the chronic schizophrenics. To obtain such an opportunity is dependent on a solution of the question of operation, i.e. that neurosurgical specialists should travel regularly to the hospitals and operate, as suggested at a conference and meeting of superintendents (Hjalmar Kjellin, Superintendent).

## The pros and cons in the annual reports

There is a divergent description of the pros and cons of psychosurgery in the annual reports from the state mental hospitals to the Board of Health. An overwhelmingly positive attitude is demonstrated as well as the opposing negative report stating mainly a negative attitude to psychosurgery. Results are presented as encouraging as well as disappointing.

Annual reports seem to confirm that the patients with chronic schizophrenia and serious symptoms were the most common candidates for lobotomy not just at the Umedalen State Hospital but also in Sweden as a whole (Paper II).

There is a tendency for a domination of a positive attitude towards psychosurgery in the early years of the practice. It is obvious that there is an unsolved conflict concerning both the true need of how many, and which patients should be operated on and by whom, the general surgeon or the specialist. The lament from the superintendent of St. Sigfrids hospital, who is left in the dark by both the unwilling neurosurgeons who are underlining the status of their speciality and the unwilling general surgeons, is revealing of the psychosurgery conflict in Sweden.

The annual report also present more interesting facts about professional transformation of psychosurgery changing very quickly from a most positive attitude to the early crude method

of prefrontal lobotomy ad modum Freeman/Watts to an introduction in Stockholm as early as in 1950 of more delicate procedures such as topectomy and similar. We can also see that superintendents, even in the mental hospitals where the method was introduced as late as after 1950, still implemented the introduction with an optimistic viewpoint that was similar to that of colleagues who started back in 1946 and had already concluded that prefrontal lobotomy was of less value and effectiveness than they thought when psychosurgery was introduced.

## THE PROCEDURE OF CONSENT

A Consent Document was used at the Umedalen State Mental Hospital. It remains unclear as to whether there had been any considerations or discussions between the Medical Superintendent and his staff before the formulation of the text was established. The Consent Document was sent by mail to relatives with instructions to respond by writing on the reverse side of the document before a certain date. If the lobotomy candidate had no relatives, a custodian or a social services representative was asked to reply.

**Fig.** Consent Document used at Umedalen (originally in Swedish).

**UMEDALEN STATE MENTAL HOSPITAL** To... the relative/guardian of  
**UMEDALEN** ... patient NN  
... address

During recent years, serious cases of mental disease have been the subject of a brain operation (lobotomy), through which those who were previously regarded as hopeless cases have been cured in such a way that the results were followed by the discharge of these patients.

While this operation, in common with other surgical procedures, can have a fatal result, I would like to ask you, as the closest relative/guardian of:  
....(name of patient).....if - from your point of view – you have any objections to the patient undergoing the proposed operation, which will be carried out at the Umeå District Hospital.

Your answer can be written down on the back of this paper and it should be signed and returned not later than:

.....(day/month).....19...(year)....

**Umedalen State Mental Hospital, Umedalen**  
**....(day/month).....19...(year)....**

.....  
**Medical Superintendent of (...male or female....) ward**

It was found, in the psychiatric records investigated (Paper II), that no consent forms existed for the majority of those operated on. From what was found in the mortality rates (PAPER I) at Umedalen, it might be hypothesized that relatives of a lobotomy candidate, would have been restrictive to consent to an operation implying a risk of 10 % or more post-operative mortality.

As can be found from the consent form there was relevant information from the fact stating that; "...it can have a fatal result". Since this fact was preceded by the statement: "...in common with other surgical procedures", there is some question as to whether such discreet and

obscure information was substantial enough for a relative to understand fully the mortality risk of a lobotomy operation.

Did doctors inform patients and relatives of the 10% or more incidence of postoperative deaths following the procedure? The question is rhetorical and impossible to answer. Could it be assumed that, on the basis of what was stated in such a general and sweeping form, relatives would subject the doctor to questions such as: how many patients have been lobotomized so far, and how many of them succumbed due to surgical fatalities? As with the former question, these are also rhetorical and speculative question impossible to answer.

It must be admitted that we are not sufficiently acquainted with the doctor-patient, doctor-relative or relative-patient relationships in order to obtain a reliable impression of the process of consent. What we do know, however, is that in the process of consent for a lobotomy, requests were sent by mail to relatives. The relatives (or a custodian or social authority officer) were asked whether or not to consent by signing their names on the reverse side of the Consent Document.

A few examples of signed Consent Documents were found (Paper II). Some relatives willingly gave their permission while others, for unknown reasons, relied on the doctor to make a decision concerning the operation. One relative did not consent because of a negative experience since a relative of the lobotomy candidate concerned had died as a result of the operation. Another example in the process clearly demonstrating the lack of patient autonomy dealt with a male patient who, while on the operating table, told the surgeons that he did not want the operation (surgical records). His appeal was ignored.

It is not known whether the practice of consent at Umedalen was typical and possibly representative for the consent processes in other state mental hospitals. The practice of consent, as far as Umedalen is concerned, may be defined – from the communicative aspect – as a one-way communication. With the paternalism of the time, the doctor suggested a lobotomy and the relatives were asked, dutifully, to say yes or no. With the communicative pattern of the process of consent, and the paternalism of the time, it may be understood that more relatives, custodians or social welfare representatives generally gave their consent to an operation than those who objected to it.

# PSYCHOSURGERY IN SWEDEN 1944–1964

## Paper I

The Umedalen State Mental Hospital is of a special historical interest. Of all the Swedish mental hospitals, at Umedalen most lobotomies were performed. 771 operations were performed, whereof 704 in the years of 1947 through 1955. The number of operations at Umedalen stands out in a national comparison. In one single year, 1951, 162 patients were operated on.

There was rapid increase of the number of lobotomies at Umedalen from the year of introduction, 1947 and the following years.

The national figures on lobotomy, from all the 28 mental hospitals in Sweden, show that in 1946, 123 operations were performed, and the year after, 184. In 1948, 547 operations were carried out and in 1949 the number was 600. The year of 1949 represents the very peak of the number of psychosurgery procedures performed in Sweden.

### **Post-operative mortality at Umedalen**

From the first operation was performed in October 1947 to the end of March 1951, 370 patients had been operated on. Of these, 23 of died; thirteen from ventricular bleeding, two from haemorrhagia cerebri, two from septicemia, one from embolia, one from myocarditis, two from hyperpyrexia, one from 'unconsciousness in connection with the operation' and in one case the cause of death is unknown. Sixteen of the patients died at the general hospital where the operations were carried out and seven at Umedalen. Apart from these cases of post-operative death, one patient died from tuberculosis three months after the procedure, one committed suicide and one died from bronchopneumonia five months after the operation. From August 1950 the lobotomies were performed as day-surgery with usually two patients being operated on the same day.

The variation of the rate of mortality between the different years of lobotomy at Umedalen ranges between 16 and 3 per cent. An increased postoperative mortality is found in the first three years, 1947–1949. Of the whole group of the post-operatively deceased women, 60 per cent died during the early years of the lobotomy practice. The lethal outcome of the operation was the consequence of hemorrhages into the ventricles of the brain. One conceivable explanation as to why the rate of mortality decreased markedly in 1950 is the fact that a new surgeon, trained at the Karolinska sjukhuset (Karolinska hospital), took over lobotomy operations during this particular year. He introduced a procedure using electric cauterization to stop the hemorrhages. It is understood that a refinement of the surgical technique was accomplished.

### **Mortality in comparison**

Figures on mortality with respect to prefrontal lobotomy in Sweden and USA range between 4 and 8 per cent, (Blomqvist & Börjeson 1951, Mindus 1997, Wohlfahrt 1947, Sjöqvist 1955, and Herner 1961). A psychiatric textbook from 1946 includes the statement;

*In a textbook, it was stated that in a surgical ward with a good standard (the mortality rate of) lobotomy should not exceed 2 per cent and could be less when the risks implied by the operation are overcome' (Sargant & Slater 1946).*

The post-operative mortality rate of lobotomy was on average 7.3 per cent. in the patients operated on at Umeå City Hospital between 1947 and 1955.

## **Women were operated**

All 16 women who were operated on in 1947, the year of introduction of the treatment, had a diagnosis of schizophrenia. Five of these women had a duration of illness of more than 20 years, nine of them between five and ten years and two less than five years.

The first patient who was lobotomized at Umedalen was a female. The operation was performed in October 1947 at the surgical department of the Umeå City Hospital.

She had a diagnosis of schizophrenia from which she had suffered for 25 years. She 'lies stiff in her bed in catatonic positions' or 'sits in bed with her knees drawn right up or lies on one side in the same position She tears things up and a thick and heavy blanket has to be used to keep her still.

She is filthy with urine and faeces and the attendants have to look after her constantly in order to prevent, as quoted from the file 'a lake under the bed'. She is also described as 'negative and unsympathetic'.

The intention of the lobotomy is to 'make the patient easier to treat'. The operation was uncomplicated. The outcome is marked in the lobotomy record with two plus signs (++). She was then moved to a less restricted ward where she became less dirty, but ate greedily according to doctors' notes. Three months post-operatively her catatonia seemed to be less intensive but 'she appears stressed with her head in a catatonic position'. The lobotomy record states that she seemed a little confused but she 'shakes hands and answers in response to a greeting. 'This woman was moved to the partially disturbed ward. She worked intensively with her knitting, but she 'sometimes stops and puts her fingers in her ears'. She was also described as being more flexible and it was noted that 'she is much better concerning urination and defecation'.

In some cases when the effect of the lobotomy did not turn out as expected, a re-operation was performed. A woman who became mentally ill in 1945 (patient # 10) had been committed at Umedalen with a diagnosis of schizophrenia; neither insulin treatment nor was effective. The record states that 'she regards herself as persecuted', and that she 'has stiffened in a negative attitude', and that 'she refuses to do any kind of work'. She also suffered from visual and auditory hallucinations.

The record states that 'there is not the slightest chance to cope with her'. She was finally operated on for the first time in November 1947. In the surgical report she is now described as being calm and easy to approach. After the operation, hallucinations relapsed. 'They were extremely vivid but indications showed that they were pleasant'. With medication the hallucinations disappeared. She could then be 'engaged in handicrafts, something that was completely impossible earlier'.

In May 1948 the woman had been taken care of in a quiet ward for some time when she started to show aggressive tendencies and was sent back to the disturbed ward. She was

then described as being difficult to take care of and was given a cure of sulfocin.<sup>21</sup> In spite of this, she continued to be negative and she refused categorically to work, according to the lobotomy record. The woman was operated on a second time at the end of July 1948. In the autumn she became mentally worse. She complained about 'the policemen' who did not leave her alone. She refused to work and she carried out impulsive and ruthless assaults. Our information concerning this woman ends here.

At the beginning of 1949, in a compilation of the then 101 lobotomized women at Umedalen, it was found that ten had died in connection to the operation. (See paper I.). Seventeen were regarded as being uninfluenced by the operation.

Of the 101 women operated on, twelve were regarded as having had a fair result from the operation but were still not able to be moved to quiet wards.

Within the group of 62 who were considered to have had a good result from the operation, 43 were moved to another ward, two became out-patients, three were sent to family-care being able to work, while 14 women (14 per cent) were discharged from the hospital.

## **The symptoms of the lobotomized women**

Of the initial 65 women who were lobotomized, 55 were long-term cases with a diagnosis of schizophrenia. One in the group was mute and one was blind.

The first patient with a diagnosis of imbecility (patient # 21) was operated on in 1948. She was a young woman who had earlier been taken into care at a home for feeble-minded women in the north of Sweden. Eleven patients with the supplementary diagnosis of schizophrenia, such as those suffering from imbecility and idiocy, could be found among the first 101 women operated on. Other diagnoses included psychopathy, epilepsy, and involuntal paranoia. The typical female patient who underwent a lobotomy at Umedalen is described as being one who tore things up, and suffered from negativism and hallucinations.

From the viewpoint of the hospital management, these women were difficult to care for – they represented disorder and chaos. They were put under restraints such as belts and heavy sheets. Phrases such as 'a lake under the bed' and words like 'masturbating' recur time and time again in the lobotomy record. The women that were subjected to lobotomy were incontinent and filthy in their habits. They also demonstrated their nakedness and offered lewd invitations during doctor's rounds. The hallucinating women in the wards for disturbed patients screeched at cursed and attacked their doctors, attendants, nurses and fellow patients.

## **Young women**

The youngest woman described in the special lobotomy records is a 17-year old girl (patient # 64) with a diagnosis of schizophrenia.

At the age of 14 the girl had been 'seduced', according to her record. From then on 'she was never the same'. She was sent to Umedalen in 1946 and cared for during less than a year. She was given insulin treatment, which had a good effect on her. Her 'exaltation with ideas of salvation and revelations of God' was lessened. After these treatments the girl became '... silent, relaxed and a bit dreamy'. A year later when she returned to the hospital, she was in a

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<sup>21</sup> Sulfocin = sulfur in oil, mainly as 'sulfocin' 1 percent. The Danish psychiatrist, Schroeder-Knud used it first in 1924 in general paresis, with an idea of using a simpler technique of fever therapy than *ad modum* Wagner-Jauregg. Sulfocin was given the patient at night as an injection; the temperature rise occurred six to eight hours later. (From Kalinowsky and Hippus: Pharmacological, Convulsive and Other Somatic Treatments in Psychiatry; 1969)

state of 'excitement and swearing'. According to the lobotomy record she became even worse and it was impossible to have a conversation with her, so she was given a lobotomy after less than five months of care. The result of the operation is described with four plus signs (++++) in the record – a good result. One month after the procedure, it was stated that 'she has behaved well and she has been at work every day in the sewing room'.

It is also stated that she was in '...good balance, though she is a bit without nuances and blunt'. The record says that there were no signs of 'an ongoing schizophrenic process'. The girl left the hospital on trial and from this point we have no further information about her.

A 22-year-old woman with a diagnosis of psychopathy and schizophrenia (patient # 94) was lobotomized in the autumn of 1948. When she was taken to the hospital at the age of 17, the record states that she was a difficult child raise. She was said to have caused trouble at school and that she was 'very forward with boys'. In the lobotomy record it is noted that 'she has tried to attract attention in different ways, but if it did not work she smashed windows'.

She was allowed to leave hospital on trial for three months, but she was re-admitted after 'intimate relationship with a boy'. From then on she was in the hospital for three years before a lobotomy was carried out. The result was unsuccessful and is marked with a minus (-).

During the post-operative phase she developed hyperpyrexia and became apathetic, apparently close to death. A few days after the lobotomy her speech became slurred and she suffered from a left-sided paresis. She also developed a 'mask-face'. Her speech recovered and she improved, but suffered from bedsores. According to the lobotomy record, she had a negative attitude and she also suffered from contractions in her knees, which had to be dealt with under anesthesia.

Six months after the operation this girl was 'in a state of dementia close to the status of post-encephalitis'. But at the same time it was noted that her passivity was decreasing successively. She was discharged from the hospital on trial. A 21-year old woman (patient #118) was taken to Umedalen with a diagnosis of 'insania epileptica'. Her seizures had shown up by the age of four. She could not benefit school because of 'lowered intelligence'. She had been in a hospital for "epileptics" but seizures had become troublesome that 'no one could take care of her'. At Umedalen she was relieved of the seizures after medication but she had to be under care in the disturbed ward because of her serious anxiety and symptoms. She was lobotomized, after one year she was described as 'kind, nice and free from seizures'.

## **The mentally retarded**

From the lobotomy records it is found that mentally retarded women were lobotomized. Within this group of eleven mentally retarded patients, with a diagnosis of imbecility and idiocy, four died post-operatively. One woman (patient # 22) was taken to the hospital from a nursing home for the feeble-minded because of difficulties encountered in caring for her.

At the nursing home she was 'strange in different ways and injured herself with sharp tools'. One of her peculiarities was hiding in a barn and threatening to commit suicide. When referred to Umedalen at the she was described as being 'constantly alarmed and extremely fractious'.

In the lobotomy record she is described as quarrelsome, fighting, tearing things up and filthy with urine. After the lobotomy, in 1948, she became 'nice and kind' and she was sent to family-care.

In the lobotomy record this mentally retarded woman could be described as 'a quarrelsome, psychopathic and imbecile' and she had 'for many years been a stumbling block for many doctors'.

Other descriptions of this group include 'quarrelling during rounds, frequently in an unrestrained manner.'

## A few children were lobotomized

One of the more unexpected findings made when studying the practice of lobotomy at Umeå Hospital concerns operations on children. One of the lobotomized children was a seven-year old mentally retarded girl. Her parents had taken care of her but, according to the record, serious problems had occurred. The girl suffered from insomnia and motor anxiety, which often caused accidents. She was not accepted at a nursing home for mentally retarded children but was sent to the pediatric clinic by a general practitioner. From the pediatric clinic she was referred to the surgery department for a lobotomy. No evidence of involvement from a psychiatric professional can be found. The girl died post-operatively. Apart from this case, another two children were lobotomized.

### Lobotomies in Sweden 1946–1966

| Year            | 1946–1949 | 1950–1953 | 1954–1957 | 1958–1961 | 1962–66 |                      |
|-----------------|-----------|-----------|-----------|-----------|---------|----------------------|
| <b>Hospital</b> |           |           |           |           |         | <b>Operat./hosp.</b> |
| Umedalen*       | 281       | 280       | 164       | 22        | -       | 747                  |
| Sidsjön**       | 315       | 162       | -         | 2         | -       | 479                  |
| Beckomberga     | 256       | 148       | 38        | 4         | 2       | 448                  |
| Lillhagens      | 136       | 157       | -         | -         | -       | 293                  |
| Långbro         | 75        | 143       | 18        | -         | -       | 236                  |
| Mariebergs      | 74        | 137       | 13        | -         | -       | 224                  |
| Ulleråker       | 20        | 120       | 63        | 1         | -       | 204                  |
| Birgittas       | 31        | 149       | 24        | -         | -       | 204                  |
| Ryhovs          | 5         | 119       | 48        | -         | -       | 172                  |
| Restad          | -         | 65        | 54        | 23        | 7       | 149                  |
| S:ta Anna       | 81        | 59        | -         | -         | -       | 140                  |
| Furunäset       | 11        | 34        | 93        | -         | -       | 138                  |
| Psykiatr.sjh*** | 59        | 53        | -         | -         | -       | 112                  |
| S:t Jörgens     | 2         | 99        | 9         | -         | -       | 110                  |
| S:t Olofs       | -         | 90        | 13        | 1         | -       | 104                  |
| Säter           | 32        | 50        | 10        | -         | -       | 92                   |
| Gådeå           | 29        | 16        | -         | -         | -       | 45                   |
| S:ta Gertrud    | -         | 44        | -         | -         | -       | 44                   |
| S:t Lars        | 11        | 22        | 4         | -         | -       | 37                   |
| Frösö           | 11        | 15        | -         | -         | -       | 26                   |
| Sundby          | 21        | 4         | -         | -         | -       | 25                   |
| S:t Sigfrid     | -         | 8         | -         | -         | -       | 8                    |
| Källshagen      | -         | 3         | -         | -         | -       | 4                    |
| Malmö Östra     | 2         | 1         | -         | -         | -       | 3                    |
| S:t Eriks       | 1         | 2         | -         | -         | -       | 3                    |
| S:ta Maria      | -         | 2         | -         | -         | -       | 2                    |
| Vipeholm        | 1         | -         | -         | -         | -       | 1                    |
| Salberga        | -         | -         | -         | -         | -       | 0                    |
| Västra Mark     | -         | -         | -         | -         | -       | 0                    |
|                 |           |           |           |           |         | <b>TOTAL</b>         |
|                 | 1454      | 1983      | 551       | 53        | 9       | 4050***              |

\*\*\* Approximately 28% of all lobotomy operations in Sweden were carried out at the two state mental hospitals Umedalen and Sidsjön. \*\*\* Psykiatriska Sjukhuset (the Psychiatric Hospital) in Stockholm acted as a clearing centre for patients who were not operated on elsewhere. In a 1955 review, written by the neuro-surgeon Olof Sjöqvist and published in the Swedish Journal of Medicine (Läkartidningen), it was stated that 469 lobotomies had been carried out at the Söder-Sjukhuset hospital in Stockholm. If the 112 operations (see table) are subtracted from the total number, and the 469 operations reported by Sjöqvist are added, this means that approximately 4407 lobotomies were carried out in Sweden between 1944 and 1966.

An additional 24 lobotomies were later found by this author and thus the figure for Umedalen is 771.

# LOBOTOMY AT A STATE MENTAL HOSPITAL IN SWEDEN

A survey of patients operated on during the period 1947 to 1958

## Paper II

A sample of 105 patients, was selected from the 771 patients which had been identified as having been lobotomized at Umedalen 1947–1958. This was made for the purpose of obtaining detailed data on socio-economic status, diagnosis, symptomatology, other psychiatric treatments applied before the pre-frontal lobotomy operation, time spent in hospital before the operation and the praxis of consent (see kappa-chapter for consent-praxis) and mortality.

The average age of the patients at Umedalen being operated on was 43 years (S.D. 12.9), for females: 44.8 years (S.D. 13.6, range 3–85) and: 39.5 years (S.D. 11.1, range 17–73) for the males. The mean age in 1947 for females was 37.6 years, which remained at a similar level during the first three years (1947–1949) and then, in 1950 and 1951, the average age at the time of the operation for the females increased to 43.1 and 48.8 years respectively. In 1952 it decreased again and, during the years 1953–1958, the picture became more variable (see Table I Paper II).

Females dominated among the patients operated on, representing 61.2 % of the total (N=771). This female dominance is persistent from the introductory year 1947 until 1952 when 83 % of those operated on were men. Between the years 1953 and 1956, a more fluctuating gender distribution is seen. A second lobotomy operation was performed in 23 cases (10 female and 13 male patients).

# LOBOTOMY IN AMERICAN AND SWEDISH MEDIA 1936–1959

## Paper III

The intention of this investigation was to penetrate the process of transmitting knowledge of, and rationale for, the new method of lobotomy to the public sphere.

### **Psychosurgery as a narration**

The history of psychosurgery may be regarded as “one story” but, even so it may be viewed as “many stories”. Historiography, the way in which stories are written, differs with the narrator as historian. If he is a psychoanalyst, and an ardent opponent of biological psychiatry, you may find his perspective dominating the story. If he is a neurosurgeon of today, with an arsenal of technological equipment, and access to sophisticated imaging devices to view the brain closely, his historiography will be different.

To investigate the configuration of lobotomy in the media, what the gains of lobotomy were for the patient, the doctors and the society, may contribute – in a wider sense – to the delineation of the process of knowledge transmission of the procedure to the public sphere. The way in which the knowledge of lobotomy was communicated, what was said and what was left out, obviously had an impact on the readers. It must be understood that the media portrayals of medicine, psychosurgery – lobotomy in our case – affected and affects peoples’ views of the method.

It would be unwise and unfair to blame the media and the journalists for what they did not tell their readers during the psychosurgery era. But, it must be important to find out which historiography they created on lobotomy.

### **Considerations and perspectives for the media study**

The theoretical perspective in researching the media and psychosurgery, is derived from a social constructive perspective which allows a reflection of “reality” as being constructed. The media, with a social constructive perspective, can be viewed as an essential actor and mediator in the construction, the rationale and meaning of the technology of lobotomy. Medical and scientific knowledge was transmitted to society by way of the articles on lobotomy.

Jordanova, (1995), explains in depth the rationale for the perspective of social constructivism and stresses that “...it does insist that there is room for a variety of interpretations and meanings, that behind consensus or ‘knowledge’ lies social processes, and that such processes involve negotiations and conflicts, both overt and implicit”.

With a social constructive perspective in a study of psychosurgery, not only the technology, the practice or the medical professions are objects of interest. The acceptance of (or reluc-

tance to accept) psychosurgery in relation to the time context, cultural context or ideological context must be considered.

Retrospective exploration of the representations of lobotomy in the popular media makes possible the tracing of the construction of lobotomy in the public sphere. Medical reporting is important to the readers<sup>22</sup> and the representation of the new technology of psychosurgery in the treatment of mental disease is especially important from the aspect of public understanding. To obtain knowledge of psychosurgery from newspapers and magazines, regarding them as trustworthy and reliable, naturally had an effect in consenting to an operation or not.

Unbalanced medical reporting, more in favour of the advocates of lobotomy, as it were in the early optimistic reporting on the method, may have induced more hope than relevant scepticism to the method.

Reflecting on the history of psychosurgery in a social construction perspective, reveals that psychosurgery, when experimented with by Gottfried Burchardt in the 1880s, was met with overwhelming reluctance by the medical profession (Stone 2001). Burchardt abandoned his enterprise. When psychosurgery was reintroduced by Egas Moniz in the 1930s, it was accepted in America, Sweden, England and many more countries. In this time and cultural context, psychosurgery became accepted and widely practised.

## **Lobotomy through the media**

When medical knowledge, in the form of the representations in the media by professional practitioners, reaches the readers, it has been constructed by a story from a journalist and then designed by the other professionals within the media organisation. The final outcome in the creation of the media product has also been adapted to the standards of the medium.

Journalistic methods may play a crucial role in the outcome of a text on a medical topic. In medical journalism – which must include all writing on medical subjects – the demands made on the journalist may be immense. The journalist may depend on a highly competent and experienced scientist or practitioner and it may be tempting to produce a text trusting the well-informed competent medical professional rather than to view the medical topic considered critically and independently with an investigative approach.

Researching the case of lobotomy in the media opens up an inquiry of the journalistic representation of the method. A basic assumption is that what was written on lobotomy also had an impact on the patients involved, the potential patients, their relatives and the practitioners. As a consequence, bias, in whatever direction, in the reporting of the new technology would have had an impact on its practice.

A pattern of positively biased reporting of lobotomy was found in the investigation of the Swedish and American media. Many questions could be answered from the study but no study of the reception of lobotomy could be made.

Due to the design of the study, we could not answer how the reporting of lobotomy affected patients, relatives and doctors. Due to the retrospective character of the investigation and limitations, as stressed above, it is impossible to claim the real “truth”. At best, we reached some possible indications of the social construction of lobotomy in the public sphere.

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<sup>22</sup> Levi (2000) in his book, *Medical Journalism, Exposing Fact, Fiction, Fraud* (Ragnar Levi and Studentlitteratur), elaborates on the effect of “good” and “poor” medical reporting; “...(good reporting) can prevent harm and may even save lives...”, “Conversely, poor medical reporting, such as the uncritical reporting of unverified health claims, can cause great harm”. p. 11

## Why investigate Swedish and American media?

One basic consideration for the decision to carry out a comparative investigation of lobotomy in the American and Swedish media (Paper III) was the imperative fact that the technology reached Sweden through inspiration from America, a country which introduced lobotomy eight years before Sweden did.

Two of the Swedish pioneers of lobotomy, a neurosurgeon and a psychiatrist had had academic connections with the United States in the 1930s. Dr Snorre Wohlfahrt (see Paper I and above for details of Wohlfahrt's role in the professional discourse), with a Sweden-America Foundation scholarship for the study of American psychiatry, had met Dr. Walter Freeman. He had even had the opportunity to see one of Freeman's lobotomy patients during his 1938 visit<sup>23</sup>. Dr Olof Sjöqvist, a neurosurgeon, had visited John Fulton in New Haven, Connecticut and the Yerkes Laboratories. There was a clear connection between the United States and Sweden regarding early knowledge of the technology of lobotomy.

One basic consideration underlying the decision to investigate the portrayal of lobotomy in the Swedish and American media was that comparisons of the portrayals of lobotomy would detect important differences reflecting two different practices of lobotomy in the two countries. One difference, which was considered, was the different rate of the implementation of lobotomy in the United States and Sweden.

Lobotomy was introduced in 1936 in America and in Sweden in 1944 but operations peaked in the two countries at the same time about 1949 (Paper IV), demonstrating the difference in the rate of implementation in the two countries.

Could we find any reasonable explanation to this phenomenon by investigating factors of the media attention directed at lobotomy in the two countries which could have hampered or promoted its practice?

Earlier research on the portrayal of lobotomy in the American popular press showed an initial positive portrayal of lobotomy, which changed over time into a more negative portrayal (Diefenbach et al. 1999). The positive media portrayals of lobotomy were inconsistent with the portrayals of lobotomy in the professional magazines (Paper III).

## An American example of reporting

On the front page of New York Times on June 7, 1937, there was an article on the first lobotomies performed by Drs. Walter Freeman and James Watts (Lawrence 1937). The time had come to present the promising results of the first operations on human beings in the USA. This took place in Atlantic City. Twenty cases had been operated on, and doctors from all over the country were gathered at a conference to meet Drs. Freeman, Watts and Barris. They had now drawn their conclusions from the outcome of the pioneering procedures of psychosurgery in the USA.

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<sup>23</sup> On March 30, 1938, Dr Snorre Wohlfahrt visited Walter Freeman at St Elizabeth's' Hospital. He carried out an interview with one of Freeman's lobotomy patients, a woman, a 59-year-old housekeeper diagnosed with involuntional depression. Wohlfahrts' interview, (Freeman writes) "brought out certain features, notably the lack of striving for perfection, the absence of self-consciousness, the improved decisiveness, the concentration on main features and increased adaptability." Ref from, *Psychosurgery*, 1942, page 223).

The article was given high priority as to its news value. It was placed in a central position on the front-page of the New York Times. The article dealt with the introduction of a new surgical method presented for the AMA (American Medical Association) at a Comprehensive Scientific Exhibit at the eighty-eighth annual assembly of the AMA (ibid).

The new operation was called “surgery of the soul”. The quotation marks are confusing because it is unknown whether “surgery of the soul” was created by the author, William I. Lawrence, or handed over by someone else to the author.

The sub-heading summarized the main findings of the results in the report of the new operation; 65 % of the patients are aided by the operation, it is a last resort procedure, and neurologists are highly sceptical. The first paragraph of the article provides interesting information about the patients who were operated on.

*A new surgical technique, known as “psycho-surgery” which, it is claimed, cuts away sick parts of the human personality, and transforms wild animals into gentle creatures in the course of a few hours (ibid).*

The metaphors, “wild animals” (*before operation*) that have been transformed into “gentle creatures” (*after operation*) contributes a lively character to the text.

The aspect of time that this transformation takes, “in the course of a few hours”, adds to the information the possible interpretation that these doctors are performing a new and necessary revolutionary procedure very rapidly and rationally. In the perspective of the identification of ‘We’ or ‘The Others’, it is definitely a positive identification linked to the doctor who is fighting the “wild animals”. The doctor is “One of Us” and the patient is “The Other”.

When thoroughly looked into, this sentence seems to imply another of the contradictory statements or elements that are used to describe this type of operation. It “...cuts away sick parts of the human personality...” Personality is being represented as a non-objective, inorganic entity in a philosophical perspective and it is conceivable that the philosopher, as well as the psychoanalysts, would say that it is impossible to “...cut away sick parts of the human personality... “.

This, the first official presentation of the pioneering surgical work that Freeman et al. had performed in the USA, concerned 20 mentally ill patients. One could say that the number operated on is very small. The conclusion, already at this point of the very early history of psychosurgery, as to what the operation could do to contribute to the patient, is overwhelmingly positive. Different symptoms are enumerated in the text and described in a way that might give the reader the impression that this surgical method could work as a cure on all kinds of psychiatric symptoms.

*The mental symptoms relieved by this new brain operation, often performed under local anaesthetic, include tensions, apprehension, anxiety, depression, insomnia, suicidal ideas, delusions, hallucinations, crying spells, melancholia, obsessions, panic states, disorientation, psychalgesia, (pains of psychic origin), nervous indigestion and hysterical paralysis (ibid).*

The overall organization of the text, the journalistic work, shows a traditional way of presenting a news story. Even though we cannot be sure of how the process of writing in this case was

done, we can make an attempt to do so, with reservations of course, for the actual decisions made by the reporter, by his editor, or by the final process of the late layout workers of the New York Times. The following can be said; there is no indication in the text of an interview with Freeman, or any of the other members of the group of doctors in his team. The critical voices, obviously been picked up by the New York Times reporter, were not seriously attended even though they were mentioned at the end of the text;

*On the other hand, some of the leading neurologists who viewed the exhibit today expressed themselves as being very sceptical about the new "psycho-surgery" and they predicted that the method would meet considerable criticism.*

These few lines indicate that Walter Freeman at this rudimentary stage in the history of lobotomy, had opponents within his own circle of professionals. The article indicates an upcoming inter-professional controversy, which later on was to become one of the most interesting in the modern history of medicine. The psychosurgery conflicts flourished in the USA at the very beginning of the era of lobotomy, as well as in what later will be called the second era of psychosurgery, mainly the 70s.

The controversy has dealt with the two perspectives, the dynamic theory and the organic and the controversy has been rather infectious. The strong proponents of a strictly organic model of psychiatry have gone so far as to propose that urban riots in the 60s and 70s were due to acts by people who had brain diseases. These could be controlled by "limbic surgery", where patients carried electrical probes in their brains, controlling their aggressive behaviour.

Massmedia has played an important role as the mirror of medical beliefs having a potential of solving a serious medical problem in human beings, such as the status of their souls.

## **Psychosurgery in a Swedish popular magazine**

To give one example of the discourse within the lay media reporting on the transformation of psychosurgery in Sweden – the critical change when lobotomies moved into the surgical theatres of general surgeons – a statement from a weekly popular magazine is expressive:

*The operation (prefrontal lobotomy) requires a physician who is used to brain surgery but it is not regarded as technically difficult or hazardous – the rate of mortality being low, for example 2–3 per cent." (Bendrik 1949)*

The finding of a statement of this kind may be interpreted as such that the media – giving voice to the lobotomy proponents without certain challenging questions from the journalist – was interacting in the depiction of lobotomy as not being particularly insecure from the viewpoint of the patient.

As is demonstrated in this thesis, post-operative mortality of lobotomy in 1949 was extremely high in certain hospitals (Paper I).

# THE IMPLEMENTATION OF LOBOTOMY IN SWEDEN

## Paper IV

### Considerations and perspective for the study

In the wide approach to this thesis project it was regarded appropriate to investigate the relationship between the practice of lobotomy and the State. Up until 1967, mental care in Sweden was under State legislation and during the early lobotomy era it was governed by the *National Board of Health*, (Medicinalstyrelsen). It was considered essential, in the wider sense, to understand the different discourses concerning lobotomy and to explore the function of the centralised Swedish system of mental care in relation to the questions of lobotomy. One relevant inquiry was: did the State, with the obligation of supervising the mental hospitals, the doctors, the attendants and the patients, play an important part in the implementation of the new practice?

Archival documents were identified for the answers in the Chief Inspector Reports from the *Chief Inspector of Mental Care* (Överinspektören för Sinnessjukvården i Riket), annual reports from the various State mental hospitals to the Swedish National Board of Health and documents from the archives, including minutes, circulating letters and other types of communications from the NBH to the medical superintendents.

### The Swedish State care system

Swedish medical, psychiatric and veterinary care has a long tradition of being organised within a central medical administration under the Swedish Government. Originating in 1633 in the *Collegium Medicorum* and the 1813 *Kungliga Sundhetskollegium* (Health Collegium), in 1877 State control was re-organised as *Kungliga Medicinalstyrelsen* (then known as the Royal Swedish Board of Health) which replaced the former administration but remains within the State care system (Kock 1963).

Initially, the purpose of organising medical care was based on the efforts of physicians in Stockholm to protect themselves from “...the flourishing army of charlatans”, as Björkqvist and Flygare depict the historiography of the origin of Swedish State medicine (ibid; Kock, p. 695).

### The Chief Inspector of Mental Care

The surveillance of mental care, a responsibility of the *Swedish National Board of Health* (Medicinalstyrelsen), was carried out by the *Chief Inspector of Mental Care* (Överinspektören för sinnessjukvården). His obligations were regulated by an instruction which legally underlined his tasks for the surveillance of mental care. He was the eyes and ears – once annually – of mental care in every individual State mental hospital. He had to ensure compliance with *Sin-*

*nessjuklagen* (The Mentally Deficient Act), established in 1931, governing Swedish mental care and thus also covering the entire period when lobotomy was practised.

The Chief Inspector had his own office in Stockholm, kept his own records and a diary, quite independently from the *Swedish National Board of Health* and the Mental Health Division (Sinnesjukvårdsbyrån), the bureau office of the Board. Annual inspections were carried out at the State mental hospitals and the Chief Inspector had to provide the Board with a general report every year, known as The Mental Care of the State (Sinnesjukvården i Riket).

The Instructions for the Chief Inspector did not indicate any legal duty for the Chief Inspector to evaluate the practice of the different methods of treatment being used in the mental hospitals, questions of indications for certain treatments or any responsibility for follow-up of the efficiency and outcome of treatment.

The obligations concerned seemed to have been more to oversee compliance with the paragraphs of the *Mentally Deficient Act*. The Chief Inspector had the obvious role of being the State representative to ensure compliance with the regulations of the act. This meant dealing with details concerning the process of patient intake, the discharge of patients, and the observation of patients in mental hospitals.

There were only a few obligations in the *Instructions for the Chief Inspector* which indicated a role in the surveillance of mental care with respect to the specific interests of the patient.

The second paragraph of the instruction, by way of exception, stated that the Chief Inspector, was obliged during each inspection to pay certain attention to "...the way in which patients are treated, and he should thereby gain a certain knowledge of the use of restraints or isolation during daytime in seclusion, and ensure that such measures are not undertaken without sufficient reasons."

According to Grunewald<sup>24</sup>, Chief Inspectors of Mental Care were recruited amongst young psychiatrists in their career for them to become orientated in Swedish mental care. It is understandable then, Grunewald concludes, that the "young psychiatrists avoided challenging the medical superintendents and the heads of mental hospitals, many of whom had ruled their hospitals for decades. Yet another explanation of the defensive attitude may have been the lack of continuity within the organisation of the Chief Inspector, since they held their position for no more than five years".

According to Dr Lassenius<sup>25</sup> commenting on the role of the State in a research interview, inspections of mental hospitals were very extensive but, normally in medical science, doctors themselves evaluate the treatments given and basically, critical evaluation is a matter of science itself and the practice. Lassenius comments that the authority of the surveillance of health and mental care in Sweden, the National Board of Health in this case-had of course a role to play in mental care but, at the time it had not a function of a quality controller, which became a much more profound undertaking later on.

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<sup>24</sup> Personal communication with Dr Karl Grunewald, Saltsjö Duvnäs 2007-03-02. Before his retirement he was an inspector of the care of the mentally retarded and has extensive knowledge of the field.

<sup>25</sup> Personal communication with Dr Yngve Lassenius, Sundsvall, March 1999. YL came as a young psychiatrist to Sidsjön State Mental Hospital when lobotomy had almost been phased out. He was later an Inspector of Mental Care.

**Table.** Compilation of data on lobotomies reported to the Swedish National Board of Health by state mental hospitals 1951.

| LOBOTOMY 1947–1951 REPORTED TO THE SWEDISH NATIONAL BOARD OF HEALTH |                   |                 |      |                |                |                          | Gender distr. |            | Neuro-surgeon operates |          |  |
|---|-------------------|-----------------|------|----------------|----------------|--------------------------|---------------|------------|------------------------|----------|--|
| Year of operation⇒<br>HOSPITAL                                      | 1947              | 1948            | 1949 | 1950           | 1951           | TOT<br>NOS. OF<br>OPERAT | F             | M          | NO                     | YES      |  |
| Umedalen <sup>a</sup>   | 31                | 153             | 97   | 80             | 9 <sup>a</sup> | 370                      | 211           | 159        | X                      |          |  |
| Sidsjön   | 74                | 94              | 82   | 84             | 23             | 357 <sup>b</sup>         | 188           | 153        | X                      |          |  |
| S:t Anna  | 0                 | 23              | 73   | 44             | - <sup>r</sup> | 140                      | 76            | 64         | X                      |          |  |
| Marieberg   | 0                 | 36 <sup>e</sup> | 38   | 44             | 6              | 124                      | -             | -          | X                      |          |  |
| Birgittas sjh.  | 0                 | 31              | 38   | 37             | 0              | 106                      | 44            | 62         |                        | X        |  |
| Psykiat. sjh.   | 12                | 27              | 31   | 26             | 8              | 104                      | -             | -          |                        | X        |  |
| S:t Lars  | 24                | 26              | 22   | 14             | 7              | 93                       | -             | -          |                        | X        |  |
| Ryhov   | 1                 | 20              | 22   | 33             | 3              | 79 <sup>b</sup>          | -             | -          | X                      |          |  |
| Sätters   | 2                 | 1               | 27   | 23             | -              | 53 <sup>i</sup>          | -             | -          | X                      |          |  |
| Gådeå   | 0                 | 23              | 17   | 1 <sup>i</sup> | -              | 41                       | 24            | 17         |                        | X        |  |
| Frösö   | 9                 | 18              | 9    | 2              | 1              | 39 <sup>h</sup>          | 12            | 27         | X                      |          |  |
| Ulleråker   | -                 | -               | -    | -              | -              | 37 <sup>e</sup>          | 19            | 18         | X                      |          |  |
| Restad  | 0                 | 0               | 5    | 22             | 5              | 32                       | -             | -          | X                      |          |  |
| Sundby sjh.   | 2                 | 14              | 14   | 1              | -              | 31                       | 13            | 18         |                        | X        |  |
| S:t Maria   | 2                 | 9               | 7    | 6              | 7              | 31                       | 15            | 16         |                        | X        |  |
| Furunäset   | 0                 | 11              | 6    | 9              | -              | 26                       | -             | -          | X                      |          |  |
| S:t Sigfrid   | 0                 | 0               | 4    | 0              | 0              | 4                        | 4             | 0          | X                      |          |  |
| Vipeholm  | 1                 | 2               | 0    | 0              | 0              | 3 <sup>l</sup>           | 1             | 2          | -                      | -        |  |
| S:t Getrud  | 0                 | 0               | 2    | 0              | 0              | 2                        | -             | -          |                        | X        |  |
| Källshagen  | 0                 | 0               | 1    | 1              | 0              | 2                        | -             | -          | X                      |          |  |
| S:t Olofs sjh.  | 0                 | 0               | 0    | 0              | 0              | 0                        | -             | -          |                        |          |  |
| S:t Jörgens sjh.  | 0                 | 0               | 0    | 0              | 0              | 0                        |               |            |                        |          |  |
| Salberga  | 0                 | 0               | 0    | 0              | 0              | 0                        |               |            |                        |          |  |
| Västra Mark   | 0                 | 0               | 0    | 0              | 0              | 0                        |               |            |                        |          |  |
|   | <b>TOTAL 1674</b> |                 |      |                |                |                          | <b>607</b>    | <b>536</b> | <b>12</b>              | <b>7</b> |  |

<sup>25</sup> Personal communication with Dr Yngve Lassenius, Sundsvall, March 1999. YL came as a young psychiatrist to Sidsjön State Mental Hospital when lobotomy had almost been phased out. He was later an Inspector of Mental Care.

## DISCUSSION

In this dissertation, the early history of psychosurgery in Sweden has been explored from four main entities or research objects, *the psychiatric hospital, the lobotomy patient, the media and the state*. The retrospective analysis and interpretation of the discourses of early psychosurgery are not without problems.

As we are unable to re-construct events from the past and place ourselves to act as participant observers, we still have to rely on some type of interpretative process to enable us to reflect on the discourses of psychosurgery.

Even the most thoroughly implemented efforts to understand the medical culture of the time do not enable us, afterwards, to claim that we fully understand the discursive elements that were adopted in order to make psychosurgery an accepted method, within and outside the professions.

But something was seen anyway and the silent secondary sources still had much to say.

### **Lobotomy and gender**

It has been demonstrated in the statistics on lobotomies at the Umedalen hospital that most of the patients who underwent lobotomy were women. The findings support earlier research on the gender distribution of the method (Braslow 1997). In a survey referred to by Braslow concerning 12,296 patients operated on in the United States, nearly 60 percent of these were women. There are some conceivable explanations of this fact, though

Braslow argues that conclusions made could be challenged because of their lack of empirical proof.

What explanations have been given concerning the domination of women being lobotomized?

*I. Women suffered more from involuntional depression than men* (Freeman 1942). *Greater preponderance of women psychiatric patients* (O'Callaghan and Douglas 1982) – the disease prevalence argument

*II. Criteria for surgery on chronically ill patients has been disturbed behaviour, and female patients are generally more disturbed on a behavioural level* (Bahrahal 1958) – the gender characteristics argument

*III. Twentieth-century psychiatry's misogynistic predisposition* (Showalter 1985) – the misogynistic argument.

Braslow takes these unproved explanations under consideration relating to his own research at Stockton Mental Hospital in California. He finds that there is no dispute concerning the fact that more women than men were operated on but he states, no adequate explanation has been forthcoming.

Braslow analyses some texts to demonstrate the communication between doctors and patients. Here is one of these examples (Braslow 1999):

Dr Baron: *What's the matter with you?*

Patient: *I don't know*

Dr Baron: *Be a good girl and talk to us*

Patient: *No.*

Dr Adams: *If you are a good girl and don't use bad language, we will talk to you.*

Patient: *Shut up.*

Braslow, when he comments on this communication, points to the doctor's way of linking this patient's "badness" to her gender, "good girls don't use bad language". He also stresses that doctors described their female patients' language as "vile," "obscene," "profane," or "perverse." Braslow reinforces his argument by pointing to another finding in this kind of interviews, namely that physicians "rarely if ever commented on male patients' profanity and never referred to them as bad boys" (ibid).

Obviously Braslow stresses what one could call the doctors' *gender-biased* view on the interpretation of proper male or female behaviour.

From reading doctors' narratives and interrogations of patients from Stockton, he arrives at a discussion of the gender distribution of lobotomy taking into consideration the therapeutic rationale in which bodily control, the brain, diseased behaviour and female sex were interwoven. Braslow takes into account the cultural factors involved in doctors' processes of arguing for lobotomy as well as their arguing about what constituted recovery after lobotomy. He gives some examples of doctors' interviews with husbands of lobotomized women, indicating narratives from the husbands focusing on the fact that they seemed happy when their loved ones had regained their ability to take care of their houses and "even to cook" after lobotomy (ibid).

From Braslow's discussion we have seen that the explanation as to why more women than men were lobotomized has to be understood from the point of view of the *culture of medicine* and the *social context* in which certain opinions were common on the *constitution of femininity*.

## **The female preponderance and lobotomy**

In Paper II in this thesis the question of why more female patients than men were lobotomized is considered.

The female preponderance among those patients being lobotomized at Umedalen is in accordance with international figures. Any attempts to explain the differences in operation rates between the sexes tend to be speculative. Perhaps the patients in the wards attended to by the medical Superintendent at Umedalen were more often subjected to some new method? Perhaps the behaviour of a filthy female in-patient, who had been in hospital for several years, urged a male psychiatrist to act forcefully? But theories are speculative and they can not be answered.

The relatively frequent use of lobotomy at Umedalen (compared with other Swedish hospitals) may also be interpreted as an ambition from the management to be “up to date”, and to take part in the development of a psychiatry towards becoming a more “scientific” branch of medicine, one reason being that lobotomy was a new method linking more to what is done in the somatic branches of medicine in the somatic hospital. Lobotomy may have “lifted” the status of psychiatry.

Our findings may also be interpreted in terms of an existing, but unexpressed, medico-cultural factor of the lobotomy era. It may thus be also a “zetgeist” phenomenon.

## **Modern hospital – modern treatment**

Umedalen State Mental hospital was opened in 1934 and at the time when lobotomy was practiced it was a newly built and modern hospital. The State Mental hospital at Sidsjön, which opened in 1943, in that respect, was even more a unit of “modern” psychiatry. The Beckomberga mental hospital was also a hospital of the 40s.

All these mental hospitals had adopted lobotomy early. We understand, with the indications of the optimism represented by their relatively extensive use of the method, that lobotomy was in a happy relationship with the “modern” mental asylums.

By contrasting with the old asylum, the Frösö state mental hospital, which was built in 19th century and where less than 50 lobotomies were performed we have an even stronger relevance for our theory that the adoption of psychosurgery had to do with “modern” mental hospital psychiatry. The medical superintendent at Frösö, John Agerberg, who had introduced the insul coma therapy in Sweden has also, in one of his annual report stated that he was cautious to lobotomy giving priority to the “older” established treatments in his hospital; “As a means of treating troublesome anxiety, leucotomy has not proven to be of especially effective” (Agerberg in the annual report of 1950 to the National Board of Health).

## **Lobotomy and mortality**

The post-operative mortality of early lobotomy was high. Of the 771 patients who were lobotomized in Umeå between the years of 1947–1958, 7.3% (57 patients) died in connection with the operation. When the operations were introduced at Umedalen in 1947 and in the two following years, the post-operative mortality increased and for the year of 1949 it was more than 15%. The majority of post-operative deaths (36 patients) was found in 1947-1949. Extensive mortality rate in the early years of lobotomy was also found elsewhere, in first series of lobotomies from Sundsvall it was 12,5 %.

There seemed to be an acceptance of mortality. But with the findings that prefrontal lobotomies at Umedalen and in other hospitals were burdened by these high mortality rates, one question obviously is relevant.

Why did they continue?

## **Who benefited from lobotomy?**

A principal problem, which becomes tangible in this historical exploration of early psychosurgery in Sweden, deals with the question of the difficulty in separating that which solely constitutes medical profits of the technology and that which is also to the benefit of staff, relatives or society as a whole. The latter does not always coincide with the wishes or needs of a patient.

With the benefit of hindsight to this history, it seems possible to conclude that one of the reasons why lobotomy was accepted – in some hospital viewed a very successful method – could have been its capacity to facilitate a problematic inner life of an over-crowded mental hospital.

Lobotomy had a large impact on and consequences for more than 4,000 patients and many more relatives. One might speculate about why details of this history have been unknown of and why the extensive experience of prefrontal lobotomy at Umedalen remained in patient records and clinical notes. Only one single official reference in the Swedish medical literature, a brief, insignificant summary of a few cases from 1958 is the remaining sign of the extensive practice of psychosurgery at Umedalen State Mental Hospital. Was it that the story in many respects was too frightening to tell? Psychiatric patients with terrible anxiety thought they would be helped by an operation on the brain but later found themselves losing ability to cry, to laugh, to work or to love someone. Relatives were encouraged by the prospects of lobotomy on their fathers and mothers, sons or daughters, putting much hope in the operation of “last resort” – but were told, just a few days after the operation – by doctors they had trusted, that the operation had caused a fatal hemorrhage.

Why was the voice of the proponents of psychosurgery stronger than the voice of the opponents?

It is easy to blame an advocate of psychosurgery, a Walter Freeman in the US, or someone “lobotomy-minded” in a Swedish mental hospital. Both were the strongest supporters, considering the number of operations they carried out or suggested be done. However it is unfair to blame certain individuals.

Returning to the “think globe” with “*psychosurgery*” in an epicentrum and stops along lines within the globe it may be the time to reflect widely on the “*practice*”, the “*professional*” and the “*media*” in the construction of the main subject.

That means to take advantage of reflecting freely and speculative on the on the three in a single sentence;

It looks as though the medical professions were blind, the governmental inspectors deaf, the media non-questioning and the patients and relatives voiceless.

Psychosurgery is still a living topic and the operation – notwithstanding the few operations today – is still depicted as the “last resort”. The scientific basis of psychosurgery is still controversial. Much is known about the brain but still it can be described as a minimum.

There is a still living interest in psychosurgery as a “last resort” undertaking. Let us hope that neurosurgeons and psychiatrists, medical ethicists and ethic review boards, inspecting bodies takes it seriously. That would mean careful ethical consideration, independent evaluative processes, independent follow-ups, openness in discussions, multi-disciplinary collaboration between different professions and a careful control of the activities in psychosurgery.

The actual practice of psychosurgery will also be reviewed, or deemed, in a future.

## **Medical journalism**

Psychosurgery was of course, interesting for the media when it was introduced. It had all the aspects for a story that attracted the newspapers and the journalists. They suddenly were able to enter into the mysterious world of the mentally ill. For the first time the proponents of the new technology could tell amazing histories about a treatment that worked. This was a cure for the most sadly afflicted patients in the mental hospitals.

The national and regional press presented the news on this method, which was being tried for the first time in Sweden. If one tries to imagine how the Swedes of the 1940s may have viewed them, it is understandable that the method must have seemed sensational but also, through the early positively biased reporting, a reliable and hopeful operation into the roots of the min.

In the headlines of these early articles, psychosurgery was presented as a “revolutionary” thing (Ögren 1999).

Typical of the early articles was that they mostly presented on lobotomy giving solely from the viewpoint of the proponent, the “lobotomist”.

This was a medical reporting which, by citing Levi (2000) (see quotation above), may well have been such as to have contributed to “cause harm” to those who were the subjects of “the last resort”.

## **Concluding comment**

Psychosurgery has been – and still is – a controversial technology. Ever since the 1880s the first attempts were made to cure the most mentally ill psychiatric patients the method has been challenged inside and outside the professions. Eager proponents, as well as those who are totally opposed to brain surgery on psychiatric grounds, have shared their views inside and outside the medical sphere. They have discussed psychosurgery by taking into consideration ethical, surgical and technological, psycho-dynamic, judicial, medico-economical, religious and scientific *pro et contra* arguments.

During some periods the psychosurgeons have been unchallenged in their views on psychosurgery, while in other periods resistance has been dominant.

There is an ethical complication in psychosurgery, which is of great importance in the form of its irreversibility. When brain tissue is destroyed, it cannot be repaired.

The theory concerning the localisation of psychiatric disease in the brain is another important and challenging topic when reflecting on the relevance of psychosurgery. Where is the seat and structure of the ‘disordered mind’ to be found in the brain – and could this location ever be found?

It seems that the acceptance of psychosurgery – which has varied during certain periods – may involve the actual power, or dominating medical paradigm, in combination with the current “zeitgeist” of society.

It is the hope of the researcher that the knowledge on the history of psychosurgery, as practiced in Sweden contributed to some understanding of a medical technology meeting a society and the marginalized patients who were subjected to it.

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## SVENSK SAMMANFATTNING

Pre-frontal lobotomi var en ny behandlingsmetod vid psykisk sjukdom som först prövades i Sverige i mitten av 40-talet. Metoden prövades första gången av en schweizisk psykiater på 1880-talet på allvarligt sjuka patienter med schizofreni. På grund av dess kontroversiella karaktär kunde inte metoden accepteras av dåtida medicinsk kultur. Gottfried Burchardt övergav metoden.

Den portugisiska neurologen Egas Moniz tillsammans med kirurgen Almeida Lima prövade tekniken på nytt i mitten av 30-talet. Han kom inte att möta samma kompakta motstånd som föregångaren Burchardt.

Ett år efter Moniz kom den amerikanske neurologen Walter Freeman att ta upp metoden i USA tillsammans med sin kirurgiske samarbetspartner James Watts.

Freeman har beskrivits som lobotomis amerikanske "fader". Freemans hade insikter om mediernas betydelse för att legitimera den nya teknologin. Han hade mycket goda kontakter med dåtidens skickligaste medicinjournalister och med hjälp av dessa blev han mycket uppmärksammasad för den säregna och nya teknologin. Snart kom Freeman att möta hård kritik från professionerna. Neurologer, psykoanalytiker, allmänläkare och pediatriker fann metoden motbjudande och främmande. En grupp psykiatriker inom GAP (Group for the Advancement of Psychiatry) publicerade mycket kritiska ståndpunkter kring lobotomins praktik och bristen på relevanta uppföljningar av resultaten.

Lobotomin kan sägas ha kommit till Sverige genom de goda kontakter som fanns mellan akademisk psykiatri och akademisk neurologi i Stockholm. Bland annat besökte neurokirurgen Olof Sjöqvist redan i början av 40-talet fysiologen John Fulton i USA. Fulton hade nära kontakter med forskare som utförde experiment på primater med ablation (borttagande) av delar av frontalloberna (pannhjärnan el. framhjärnan) för att studera effekten i deras beteenden. Psykiatern Snorre Wohlfahrt gjorde i slutet av 30-talet en lång studieresa i USA. Han träffade där framstående psykiatrer t.ex. Manfred Sakel som införde insulinchocksbehandlingen i USA. Wohlfahrt besökte också Freeman och Watts. Bland annat undersökte han en av Freemans lobotomerade kvinnor.

Wohlfahrt och Sjöqvist är två av den svenska psykocirurgins nyckelpersoner. Vid de tidiga serierna av lobotomier gjordes relevanta studier av utfallet av lobotomier, där man i studierna tog hänsyn både till kirurgiska och psykiatriska aspekter på den nya teknologin.

Wohlfahrt var skeptisk till lobotomi, särskilt vad gällde effekten på patienter med långvarig schizofreni. I litteraturen varnade Wohlfahrt för att "ge sig ut på en allmän offensiv" mot schizofreni. Synpunkten kommunicerade han i litteraturen och på de tidiga kongresserna för psykiatrer i Skandinavien.

Psykocirurgin kom att bli starkt omfattad på de moderna sinnessjukhusen i Sverige. Umedalens sjukhus, Sidsjöns sjukhus, Beckomberga och Lillhagens sjukhus kom snart att ha opererat hundratals patienter, främst de "utbrända" schizofrenierna.

Den pre-frontala lobotomin hade redan börjat bli föråldrad när den mot slutet av 40-talet introducerades av överläkarna på de svenska sinnessjukhusen. Neurokirurgerna i Stockholm

som reste omkring i världen hade fått lära sig om de nya mindre riskfyllda och mindre invasiva (kirurgiskt omfattande) ingreppen. De kom därför snart att se pre-frontal lobotomi som en osäker metod. Fenomente finns väl beskrivet i de årliga berättelser som sjukhuscheferna lämnade till Medicinalstyrelsen. Här ser man att sinnessjukhusen har svårigheter att få lobotomier gjorda. Problemet är antingen motståndet från neurokirurgerna som har bättre metoder eller att vissa allmäknkirurger inte vill utföra lobotomi eftersom man inte tycker sig kunna eller ha rätt att operera i hjärnan.

Sjukhuscheferna befinner sig i en slags korseld mellan en gammal psykokirurgisk teknologi och en ny.

Trots att den pre-frontala lobotomin har fått låg status bland neurokirurger så fortsätter metoden att användas på små lasarett i Sverige. På dessa enheter saknar man egentligen viktig teknisk utrustning för att t.ex. stoppa de så vanliga blödningarna i hjärnan vid en lobotomi.

På Umedalens sjukhus, varifrån patienter skickades för lobotomi på Umeå lasarett, belastades lobotomin med dödlighet på 10-17 %. De första tre åren som den brukades steg dödligheten varje år. 1951 kom en kirurg till Umeå som var skolad på Karolinska sjukhuset. Han hade med sig en "elektrisk kniv", en koagulationsutrustning med vilken han nu effektivt kunde stoppa de intrakraniella blödningarna. Han fick ner dödligheten avsevärt. Den genomsnittliga dödligheten i lobotomi har i detta projekt räknats fram till något mer än 7% bland de 771 som lobotomerades. 57 patienter avled.

Medicinalstyrelsen hade tillsynen över mentalsjukhusen. Den situation som rådde med hög dödlighet vid lobotomier var kända för de inspektörer som årligen kom på besök. Dokumenten berättar om att dödligheten är känd. Vad gäller operationerna i Umeå ser man försiktiga kommentarer i deras rapporter t.ex. att "det är en överdriven förhoppning att man vill lobotomera tio patienter per vecka".

Medicinalstyrelsens roll kan beskrivas som defensiv vad gäller tillsynen av lobotomin praktik i Sverige. Man finner i det regelsystem som omgav dåtidens verksamhet att tillsynen av sinnessjukvården är svag och den liknar inte den tillsyn av psykiatrin som senare skulle komma.

De svenska medierna uppmärksammade lobotomin. Dess karaktär som ett radikalt ingrepp i hjärnan torde ha upplevts lika säregat av dåtidens journalister som av de läsare som fick del av beskrivningarna av den nya teknologin. I den jämförande undersökningen av rapporteringen av lobotomi i svenska och amerikanska medier som presenteras finner man att de flesta av de 111 artiklarna är positiva eller neutrala till lobotomi. Av de artiklar som kan sägas beskriva lobotomin som tveksam eller dålig hittar man de flesta i de amerikanska artiklarna. Det har tolkats som en större benägenhet att förhålla sig kritiskt till de som uttalar sig om lobotomin. Benägenheten att i huvudsak beskriva lobotomin som en lyckad metod tycks alltså större i svenska medier än i amerikanska. En rimlig och bra förklaring till skillnaderna är svår att göra. En tänkbar teori kan vara att det rådde en starkare paternalism inom svensk medicinsk kultur än inom amerikansk och att den avspeglat sig i en följsamhet hos lokala medier att rapportera just så positivt som metoden framställdes av den överläkare som uttalar sig om lobotomin och som förespråkade den mest.

Denna avhandling har förhållit sig till diskursen kring tidig svensk psykokirurgi genom att beforska samtalet inom professionerna, mediernas konstruktion av metoden och statens och Medicinalstyrelsens roll.