EARLY HISTORY OF HAND SURGERY IN THE NETHERLANDS*

“Tous les arts sont frères”
“Chacun apporte une lumière aux autres”
Voltaire

When or why is a concept, movement or society born? It is never on a single day because a group of people suddenly feels creatively urged. Honestly, this would make a historian’s task too simple. The answer, as we know, is far more complex and subject to individual interpretation.

Wars occur at the interface of chaos and order, where newly formed lives replace old destroyed ones. As a collateral effect, the needs of wartime wounded stimulate the development of new surgical techniques. The Netherlands remained neutral in World War I, only briefly served as a battlefield during World War II and suffered academic repression under the Nazi regime. These facts played an intricate role in its slower progress in hand surgery.

During and after World War I, working in Brunn, Vienna, Budapest and Berlin, the Dutch surgeon Jan F.S. Esser developed arterial flaps¹, ² and epithelial inlay techniques, the bases for modern reconstructive surgery (Fig. 1a). His case report on “Reconstruction of a hand and four fingers by transplantation of the middle part of the foot and four toes” received worldwide attention.³

Before World War II, frequently referred to as “petite chirurgie” or minor surgery, hand surgery was considered part of general surgery. Hand cases served as training material for the junior surgeon in the catacombs of a major hospital. Exceptionally, G. Criete became interested in the repair of tendons while training under Prof. Dr P.R. Michael at the “Zuidwal” Hospital in The Hague. Unfortunately, in 1946, he died in an accident before having the opportunity to defend his doctoral thesis on this topic.

Occasionally after the War, an intrepid surgeon with keen interest in intrinsic mysteries of the hand would attempt elevating treatment standards in his hospital by seeking further training under Prof. Marc Iselin in Paris. However, his efforts usually remained in vain, as for years many colleagues continued selecting finger amputation as the preferred treatment. Understandably, while wartime lapse in international communication hampered surgical advances in The Netherlands, years of post-war poverty favoured the development of important new specialties such as thoracic and peripheral vascular surgery at the expense of others such as orthopaedic surgery and urology.

In the late forties and early fifties, interest in hand surgery surged as small groups of Dutch surgeons who trained in plastic surgery in the United Kingdom returned to the Netherlands armed with new hand surgery techniques. Arriving first, C.F. Koch, J.C. Raadsveld and C.A. Honig founded the plastic surgery specialty in Holland in 1950. Returning later, through their surgery, lectures and publications, J. Hage, A.J.C. Huffstadt, S. Woudstra and E. Frederiks pioneered the development of hand surgery (Figs. 1b-c). Huffstadt wrote his doctoral thesis on tendon grafting and Hage, on pollicisation. While organisation of hand surgery as a specialty in the Netherlands remained in an incubation stage until the mid-sixties, a number of surgeons made important individual contributions. Becoming aware of the social impact of hand lesions while training under Sir Archibald Mc Indoe, Raadsveld was the driving force in coordinating the care of hand patients in The Netherlands. Back in Rotterdam, he organised the first multidisciplinary hand team that included representatives of the surgical and rehabilitation departments, as well as socio-economic services (insurance companies and labour board).

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In 1966, two events catalysed the formation of Dutch hand surgery organisations. First, on January 20, 1966, the foundation of the International Federation of Societies for Surgery of the Hand (IFSSH) in Chicago, encouraged a worldwide dissemination of knowledge, specialized training and organisation of regional societies. Second, on May 20 and 21, 1966, The Netherlands held its first formal hand surgery meeting, International Conference on Surgery of the Hand, at the Dijkzigt Hospital in Rotterdam. Jointly organised by the Dutch and Belgian Associations for Plastic Surgery, the meeting featured world-renowned authorities who impressed the audience with the quality of their presentations (Fig. 2). Sharing his moving rehabilitation experiences with severe hand injuries in pilots of the Battle of Britain, Christopher (Kit) Wynn Parry represented the birth of hand rehabilitation.

**FIGURE 2:** INTERNATIONAL CONFERENCE ON SURGERY OF THE HAND

*Organisation:* Dutch and Belgian Associations for Plastic Surgery  
*Date:* May 20 and 21, 1966  
*Place:* Auditorium, Dijkzigt Hospital, Rotterdam (Holland)  
*Chairman:* W.L. White (USA)

**PROGRAM**

**FRIDAY, MAY 20**

2.00 p.m. Scientific Session  
J.C. RAADSVELD (Holland) – Introduction  
J.M.F. LANDSMEER (Holland) – Functional anatomy of the hand  
J.D. MULDER (Holland) – Contractures of the fingers caused by muscular imbalance  
M. BÄCKDAHL (Sweden) – Rheumatoid arthritis and surgery of the hand

**SATURDAY, MAY 21**

9.30 a.m. Scientific Session  
J. POLUS (Belgium) – The use of broken incisions in the treatment of Dupuytren’s contractures  
R.P. HERMANS (Holland) – Primary treatment of the burnt hand  
G. MATTON (Belgium) – Reconstruction of the burnt hand  
S. HARRISON (England) – Flexor tendon grafting  
G. STACK (England) – Restoration of prehension in severely injured hands,  
S. WOUDSTRA (Holland) – Reconstruction of the thumb

2.00 p.m. Scientific Session  
W.L. WHITE (USA) – Practical considerations concerning dynamic function of the human hand  
A. PARKES (Scotland) – Ischemic contractures of the hand  
C.B. WYNN-PARRY (England) – Rehabilitation of the severely injured hand

**FIGURE 1:** Dutch surgeons who pioneered the development of hand surgery in the Netherlands include: A. Jan F.S. Esser; B. J.C. Raadsveld; C. J. Hage; and D. A.J.C. Huffstadt.
After attending the 1967 meetings of the British Hand Club and Groupe d’Etude de la Main (GEM), Jacques van der Meulen became member of both prestigious societies. He presented his work on tendon healing at their London and Paris meetings in November 1968. Having the opportunity to meet and share information with many foreign colleagues, including a number of illustrious pioneers, stimulated the idea of developing a Dutch hand surgery organisation. In the spring of 1968, following the Joint European Meeting of the American, British and French Societies in London, Oxford and Paris, Jacques van der Meulen initiated the foundation of The Dutch Club for Surgery of the Hand with the support of Johan Landsmeer. Held on June 14, 1968, at the Dijkzigt Hospital in Rotterdam, the first meeting was attended by founding members, including A.W. Bom, E. Frederiks, J. Hage, H. Herschel, C.A. Honig, A.J.C. Huffstadt, J.D. Mulder, H.S.M. Raat, J.C. Raadsveld and S. Woudstra. The Club members represented various disciplines including anatomy, orthopaedic surgery, plastic surgery and rehabilitation. The agenda of the first meeting addressed two proposals:

2. Invite the American Society for Surgery of the Hand (ASSH) to include The Netherlands in its agenda for a Joint European Meeting with the Scandinavian Society for Surgery of the Hand in the spring of 1970.

Dr. Vinton Siler, ASSH President, whom van der Meulen met in 1968 at the joint European Meeting in Oxford, accepted the invitation. In order to coordinate the scientific program, van der Meulen visited Erik Moberg in Göteborg. He recalls, “We first met in his clinic, where much to my surprise an open stairway directly connected the operating room to the outpatient department below. Moberg said it was extremely efficient because he had never seen a microbe crawling upwards. Later Moberg took me to his small cottage on the edge of a seaside bay. The icy surface of the frozen water seemed to touch the foggy horizon. Moberg had to bend almost in half to enter his little cabin, but to me it was crystal clear…the tall man was in his element.”

On May 3, 1970, following their meeting with the Scandinavian Society in Copenhagen, Malmö, Göteborg and Heinola, our colleagues from the ASSH arrived in Holland for a memorable joint meeting with the Dutch Club for Surgery of the Hand. The program included two days of scientific sessions separated by a free day of sightseeing.

On May 4, the group met in Leiden, home of the oldest university in the Netherlands and birthplace of the immortal Rembrandt. Held in Prof. Landsmeer’s Department of Anatomy and Embryology at the University of Leiden, the outstanding session “The Anatomical Exploration of the Human Hand” included visits of the exhibits, presentations by department members and Landsmeer’s anatomical demonstrations (Fig 3). Incidentally, surrounded by “cream of the crop” physicians, the Great Anatomist received the well-deserved best care for his acute low back pain.

In his 1965 ASSH Founders Lecture, “The Anatomical Exploration and Functional Analysis of the Human Hand”, Landsmeer clarified the pathomechanics of the boutonnière and swan neck deformities. He explained the role of Weitbrecht’s ligament in coordinating finger movements and its effect on the bi-articular intercalated bone system following lesions of the extensor aponeurosis. He became the icon and anatomical guru for hand surgeons of those days. His Atlas of Anatomy of the Hand, published in 1976, further added to his fame. For his many contributions, Landsmeer received honorary memberships in the American, British, French and Dutch societies for surgery of the hand. In 1986, he received the honour of recognition as Pioneer in Hand Surgery at the Third International Congress of the IFSSH, held in Tokyo, Japan.

On May 6, the meeting convened in Rotterdam, the “Phoenix City”. It arose from the ashes of WW II bombardments to become Holland’s second largest city and the world’s largest seaport. Held in the new De Doelen Concert Hall and chaired by the illustrious Prof. Joseph H. Boyes, “The Symposium on Surgery of the Hand” featured an internationally acclaimed faculty that discussed new advancements in primary treatment of hand injuries and hand reconstructive procedures (Fig. 4).
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FIGURE 3: THE ANATOMICAL EXPLORATION OF THE HUMAN HAND

DEPARTMENT OF ANATOMY AND EMBRYOLOGY
UNIVERSITY OF LEIDEN
Monday, May 4, 1970

On the occasion of the meeting of
The American Society for Surgery of the Hand and
The Dutch Club for Surgery of the Hand

10.00 a.m. J.M.F. LANDSMEER – Welcome and general introduction
10.05 a.m. ANNELISE LINSEN and ANTONIE M. LUYENDIJK-ELSHOUT – Historical notes
10.15 a.m. J.M.F. LANDSMEER – General survey of the exhibits
11.00 a.m. Coffee break and visit of the exhibits

12.30 p.m. Buffet Lunch
Special topics

14.00 p.m. K. MECHELSE and B. MATRICALI, J.M.G. KAuer – The carpal tunnel syndrome
ELISABETH A.M. MATRICALI–VAN LAMOEN (Surgical, electromyographical and anatomical aspects)
14.30 p.m. J.M.G. KAuer – The tendon bursae in the hand
14.50 p.m. J.M.F. LANDSMEER – Demonstrations
15.15 p.m. Visit of the exhibits

FIGURE 4: SYMPOSIUM ON SURGERY OF THE HAND

Organisation: Department of Plastic Surgery of the Surgical Clinic of the Rotterdam Medical School
On the occasion of the European Meeting of the American Society for Surgery of the Hand
Date: May 6, 1970
Place: De Doelen Concert Hall, Rotterdam
Chairman: PROF. JOSEPH H. BOYES (USA)

PROGRAM

9.00 a.m. Registration
9.30 a.m. PROF. H. MULLER (Holland) – Opening remarks
9.45 a.m. Part I – Primary Treatment of Hand Injuries
PROF. ERIK MOBERG (Sweden) – Basic principles
DR. A.J.C. HUFFSTADT (Holland) – Skin-repair
DR. LEE MILFORD (USA) – Bone-repair
DR. SVANTE EDSHAGE (Sweden) – Nerve-repair
DR. J.C. VAN DER MEULEN (Holland) – Tendon-repair

13.45 p.m. Part II – Reconstructive Surgery of the Hand
DR. MARTIN A. ENTIN (Canada) – Basic principles
DR. J. HAGE (Holland)
DR. JAMES HUNTER (USA)
DR. J. RAMSELAAR (Holland) – Tendon transfer in median and ulnar palsies
DR. LEONARD GOLDNER (USA)
DR. RAYMOND CURTIS (USA) – Surgery of the stiff finger joint (Film)
DR. ALFRED SWANSON (USA) – Surgery of rheumatoid arthritis

16.30 p.m. MR. PIERRE JANSSEN (Holland) – Perhaps about hands and maybe about art
The outstanding success of the Dutch-American meeting provided an important stimulus for the development of hand surgery in The Netherlands. In 1972, The Dutch Club for Surgery of the Hand became a formal society and outlined the charter of the Netherlands Society for Surgery of the Hand. Members of the board included Johan Landsmeer, President; B. van Linge, First Secretary; A.J.C. Huffstadt, Treasurer; and J.C. van der Meulen, Assistant Secretary. On December 2, 1972, honoured by the presence of acting Godfathers Raoul Tubiana and Graham Stack, the Society held its first meeting in Rotterdam (Fig. 5).

**FIGURE 5: THE NETHERLANDS SOCIETY FOR SURGERY OF THE HAND**
First Meeting, Rotterdam, December 2, 1972

<table>
<thead>
<tr>
<th>Time</th>
<th>Speaker</th>
<th>Topic</th>
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<tbody>
<tr>
<td>11.00 a.m.</td>
<td>Dr. E. Frederiks</td>
<td>The treatment of degloved fingers</td>
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<td></td>
<td>Dr. J.J.A.M. Bloem</td>
<td>Recurring digital fibroma in infancy</td>
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<td></td>
<td>Prof. Dr. A.J.C. Huffstadt</td>
<td>Haemangiomas in the hand, conservative approach</td>
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<td></td>
<td>Dr. A.P. Pieron</td>
<td>Correction of malrotation by metacarpal osteotomy</td>
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<td></td>
<td>Dr. E. Heybroek</td>
<td>Problems around the reconstruction of a first metacarpal bone</td>
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<tr>
<td>12.30 p.m.</td>
<td>Lunch</td>
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<tr>
<td>13.30 p.m.</td>
<td>Founders meeting of the Netherlands Society for Surgery of the Hand</td>
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<tr>
<td>15.30 p.m.</td>
<td>Mr. G. Stack</td>
<td>The palmar fascia</td>
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<td></td>
<td>Prof. Dr. J.M.F. Landsmeer</td>
<td>Observations of the hand of some primates</td>
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<tr>
<td></td>
<td>Prof. R. Tubiana</td>
<td>Paralysis of the thumb</td>
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The courses that covered a wide spectrum of hand surgery topics, became as important as the scheduled scientific reunions. To name only a few, the course sponsors included the Medical Centres of the Universities of Leiden, Maastricht, Utrecht and the Erasmus University in Rotterdam.

In Utrecht, on June 6, “D-Day” 1973, having satisfied the entrance requirement of national society status, the Netherlands Society for Surgery of the Hand applied for membership to the International Federation of Societies for Surgery. On August 24, 1975, the IFSSH welcomed the Dutch Society in its mondial fraternity of hand surgeons at its Council Meeting in Paris. Van der Meulen was appointed as Dutch delegate on December 12, 1975. The new status not only gave the Society needed political power, but also made its members, although still small in number, aware of their academic responsibilities. In 1974, van der Meulen became the first lecturer in hand surgery at the Erasmus University of Rotterdam. In 1979, J. Bloem became full Professor in Surgery of the Hand at the University of Amsterdam. The hand surgery specialty reached its growing phase in The Netherlands.

At its 1977 Council Meeting, the IFSSH suggested the possibility of organising an International Congress to promote further the quality of hand surgery worldwide. Taking the leadership, Alfred B. Swanson, the new Secretary-General who could be very persuasive, felt that Rotterdam with its excellent University facilities would be an ideal site. He worked on the idea with van der Meulen. In 1978, the Federation Council approved the proposal of The Netherlands Society for Surgery of the Hand to act as hosts and assist organising the meeting. It took great faith, confidence and personal efforts on the part of those involved to overcome the enormous difficulties in coordinating the First International Congress. Before securing the organisation, the Secretary-General and van der Meulen held multiple conferences in the United States, Norway, Britain and France. Van der Meulen was able to obtain financial guarantees with a Dutch organizing and travel agency. Bob Huffstadt accepted the position as chairman of the Scientific Committee, which was formed by members of the Netherlands Society. The Erasmus University of Rotterdam offered its facilities.

The First IFSSH International Congress convened on June 16, 1980, in Rotterdam, under the patronage and presence of His Royal Highness Prince Bernhard of The Netherlands (Figs. 6 to 8). The outstanding scientific and social program was attended by 526 registrants and 140 accompanying persons representing
51 countries. The Federation released its new logo representing a hand on the face of the world globe and designed by Dutch artist Kees DeVries from Erasmus University (Fig. 9).

At the invitation of Graham Stack, Former IFSSH Secretary-General, and under the leadership of Evelyn Mackin, President of the American Society of Hand Therapists, more than 200 therapists attended the Rotterdam Congress, marking their first worldwide meeting. Evelyn’s dream of a World Confederation of Hand Therapists would be born in Rotterdam in 1980.

**Figure 6:** Organizers of the First IFSSH International Congress in Rotterdam, The Netherlands, June 16-20, 1980, included (from left to right): Jacques van der Meulen, Host-Chairman; Alfred B. Swanson, United States, IFSSH Secretary-General; and Bernard McC. O’Brien, Australia, IFSSH President.

**Figure 7:** Conference leaders of the First IFSSH Congress included (from left to right): Raoul Tubiana, France; Erik Moberg, Sweden; Alfred B. Swanson, United States; Bernard McC. O’Brien, Australia; Graham Stack, England; R. Guy Pulvertaft, England; Dieter Buck-Gramcko, West Germany; and Tatsuya Tajima, Japan.
Figure 8: His Royal Highness Prince Bernhard of The Netherlands greeting Hans Landsmeer and Jacques van der Meulen at the opening reception for the First IFSSH International Congress, Rotterdam, June 16, 1980.

Figure 9: Group of hand surgeons and hand therapists who participated in the First IFSSH International Congress.
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Figure 10: The new logo of the International Federation of Societies for Surgery of the Hand represents a hand on the world globe. Designed by Dutch artist Kees DeVries from Erasmus University, it was released at the occasion of the First International Congress.

At a time when hand therapy as a specialty virtually did not exist in the Netherlands, van der Meulen visited John Madden’s hand unit in Tucson, Arizona. While there, he realised the important role of hand therapy in postoperative care. At the 1986 IFSSH International Congress in Tokyo, he met Gwendolyn van Strien, a young Dutch therapist trained by Evelyn Mackin in the USA, and invited her to work in Rotterdam. Eventually, Gwendolyn played a prominent role in the evolution of hand therapy in the Netherlands and in the formation of The Dutch Society for Hand Therapy, which is now part of the World Confederation.

In retrospect, it is probably fair to say that the 1980 IFSSH International Congress marked the transition between two periods. The years following WWII, knew a steadily increasing number of dedicated individual surgeons who were constantly trying to improve the quality of hand surgery, usually by trial and error. The formation of national societies allowed dissemination and exchange of knowledge, which ultimately led to the organisation of the First World Congress under the aegis of the International Federation of Societies for Surgery of the Hand. After the Congress, hand surgery continued to flourish with national societies firmly in charge and a new generation of ambitious young surgeons pursuing further perfection. The incorporation of microvascular surgery drastically expanded the spectrum of hand surgery techniques, leading to improved results and increasing respect for the specialty. Hand Surgery finally earned its place as an important surgical specialty.
REFERENCES: