

The Life and Work of Isidore Snapper (1889-1973)

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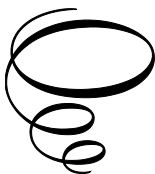
The Champion of Bedside Medicine

By

Arie Berghout

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The Life and Work of Isidore Snapper (1889-1973):
The Champion of Bedside Medicine

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(Courtesy James Snapper)

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INTRODUCTION

'I can tell you one thing. It was the most frequently stolen book from medical libraries'.¹ This was the response of the American internist Alvin Kahn to my question about the success of *Bedside Medicine*, the book he co-authored with Isidore Snapper. The book was written in New York; in Beijing where he had worked, Snapper had described his professional experiences in another book, *Chinese Lessons to Western Medicine*. But his roots were in Amsterdam where he became Professor of Medicine at an unusually young age.

Snapper's professional life during the first half of the twentieth century unfolded at the intersection of classical descriptive medicine and modern experimental medicine during a period of time when supremacy in medicine moved from Germany to the Anglo-Saxon world. Internal Medicine was a broad discipline at the time and a man like Snapper saw patients with infectious diseases, pulmonary cancer and bone diseases, and occupied himself with research into jaundice, renal function, diabetes and thyroid disorders.

He was a hero to famous American physicians like the cardiologist Eugene Braunwald and internist Gene Stollerman, a role model to the Dutch internists Gerrit Lindeboom, Juda Groen and Maurits Frenkel. Towards the end of his life, his former colleagues and students organized dinners in his honour. After his death, obituaries were published² and he was commemorated in a review of Jewish physicians.³ More than forty years after his death, Isidore Snapper is still a source of inspiration.⁴ The postgraduate institute of the Dutch Society of Internal Medicine is named after him.

I first became aware of Snapper's name in 1974, in the former university bookshop 'Vermeulen' in the centre of Amsterdam, near a hospital called the 'Binnengasthuis'-'BG'-now Amsterdam University Medical Centre, where I was house officer at the department of Internal Medicine. The cover of a book with a vibrant green colour attracted my attention: *Bedside Medicine*. 'You should definitely buy that book', the bookseller said to me 'it is really something special'. I followed her advice-she was well informed about the books for sale in her shop-persuaded by the title, the names of the authors, and the cover. At home,

I started reading and could not stop. It was fascinating indeed. Snapper demonstrated an enthusiasm for medicine that is absent in most textbooks. Reading *Bedside Medicine* gave a sense of relief, a feeling of easiness, and made you laugh because of the many anecdotes and patient histories told with a peculiar sense of humour. This unusual book was published in New York in 1967. A large and varied collection of medical case stories and syndromes was discussed, but it was neither a full textbook nor a manual. It was a rich book, full of the history of medicine and the names of famous physicians whose names which are linked to rare diseases. There were no tables or figures, no references, and it contained neither an index or a bibliography.

During my residency in Internal Medicine—was my choice for specialization inspired by Snapper?—I often consulted *Bedside Medicine*, eager to know Snapper's opinion on a case I had seen that very day. More often than not my mood was elevated after reading his humorous comments, a surprising anecdote or an unusual patient history. When I became Chief of Medicine in Rotterdam—in the Zuiderziekenhuis which looked surprisingly similar to the old Binnengasthuis in Amsterdam—I conceived the idea of studying his life and works further. I had interviews with Maurits Frenkel, Emeritus Professor of Medicine, and with Mart van Lieburg, Professor of the History of Medicine. Van Lieburg gave me Snapper's autobiographical notes, later published as *Notes for Memoirs*. These notes were an important source of information, but gave an incomplete impression and were—necessarily—subjective. A scientific biography of one of the most important and colourful representatives of Dutch Internal Medicine, was urgently needed.⁵

The interest of doctors in the history of medicine seems to be small and this probably explains why biographies of—at least Dutch—physicians are few. Those well-known are of Herman Boerhaave, the plastic surgeon Esser,⁶ the first female Dutch physician Aletta Jacobs⁷ and the controversial Amsterdam GP Evart van Dieren.⁸ This has changed as recently biographies of the gynaecologist Hector Treub⁹ and the pharmacologist Ernst Laqueur¹⁰ have been published. But never a biography of an internist.

According to the Dutch historian Jan Romein, the task of a biographer is: 'To reproduce the central figure within the circumstances of his time and demonstrate what resistance he had to endure, how time supported him, how he developed his ideas about the world and how he reflected these ideas in his work'. To finally reach the heart of the matter: 'This was the core of this man, like this he must have been'.¹¹

What was at the very roots of Snapper? What was his deepest inner drive? Scientific curiosity, unrestrained ambition, a sense of heavy responsibility? What was his significance for clinical science, his place in the history of medicine? What kind of a person was he? In what way was he influenced by his time,¹² what was his influence on others, and, last but not least: what is his significance for us today?¹³

1 AROUND THE WORLD IN FIFTY DAYS

'All doctors who are called up for service in the East Indies, should command the Javanese or Malayan language'

—I. Snapper, PhD thesis (1913)¹⁴

On February 11, 1939, Professor Isidore Snapper and his wife Hetty van Buuren arrived in Beijing. They had left Amsterdam in December 1938. They did not speak Chinese, not a single word. Why had they travelled to China? In reality, it was a dangerous destination. Large areas of the country had been occupied by the Japanese since 1937, an extremely violent and horrific war. By December 1937, a few months into the war, the Japanese had captured Nanjing, once China's capital, massacred the majority of its inhabitants and destroyed the city. The result of the so-called three-in-one strategy of 'plunder, murder and burn', was more than 200,000 victims. This number more than doubled by June 1938 when 500,000 people were killed following generalissimo Chiang Kai-shek's decision to breach the dykes of the Yellow River in order to stop the progress of the Japanese armies. Moreover, since the fall of the Chinese emperor in 1911, the country had been afflicted by civil wars, epidemics and famine. Conflicts between the nationalist government of Chiang Kai-shek in Nanjing and the communists under Mao Zedong in the North had paralyzed China. This enormous country had been an easy prey for Japan.¹⁵ It was the nadir of the 'century of the humiliation of China'.¹⁶

The Snappers were on their way to 'Peiping Union Medical College', PUMC, where Isidore had been appointed Professor of Medicine. He maintained his position at the University of Amsterdam and at the Department of Medicine of the University hospital, 'Wilhelmina Gasthuis', as Chief of Medicine. His scientific publications and his fame as an outstanding clinical teacher had taken him to the top of the profession in his country.¹⁷ For this reason his unexpected leave had shocked many, although he had not resigned, and nor had he severed his ties with the University of Amsterdam. After a year he would come back. He had been granted temporary leave by the trustees till September 1, 1940.

PUMC was an American hospital in Beijing, an *American transplant*, created by the Rockefeller Foundation. The missionary dreams of multimillionaire John D. Rockefeller were fulfilled at the opening of PUMC in 1921 following preparatory work begun in 1915. This was not just an ordinary hospital. It was one of the 'jewels in the crown' of the Foundation, dedicated to the training of the future medical *elite* of China who, in turn, could set up schools for the training of medical and nursing staff and researchers for medical schools. The standard of teaching would equal the best American and European universities.¹⁸ In China 'the best of the West in medical science' would be introduced. Accordingly, students were carefully selected and the number of annual new admissions was small. The aim was academic excellence: quality, not quantity. Only those students who had followed preparatory training after secondary school were admitted. This three-year training—only to be taken at a few Chinese universities—involved the following subjects: Chinese, English, French or German, biology, chemistry and physics. After screening there was an entrance examination.¹⁹ Snapper was going to meet a carefully selected group of students. This 'Johns Hopkins' medical school of China, modeled on the prestigious prototype of American medical teaching in Baltimore, Maryland, was a place perfectly suited to Snapper's ambitions. Was that the reason why he had accepted the vacant chair of Medicine in Beijing?

Or did other motives play a role in why the Snappers wanted to move away from The Netherlands? They were Jewish. Could that explain their decision to leave? Jewishness had little meaning for them, they no longer attended religious sessions at the synagogue. Hetty had converted to Christianity, even before their marriage, and the children had not received a Jewish education. But it became more and more obvious that German antisemitism did not take any exceptions into consideration. Jewish was Jewish. More and more Jews, many colleagues among them, had fled from Germany and Austria. Did Snapper anticipate the impending disaster? Had more Jews left The Netherlands for that reason?

Their three children had not joined them on their way to China. The Snappers had arranged for two of them to stay in the United States. They had mulled over the idea of taking 21-year-old Elsie, the youngest, with them. Given the unstable situation in China, they had discarded that option.²⁰ Unwilling to leave her alone in Holland, they had placed her under the care of George Baehr, fellow internist at Mount Sinai Hospital, Manhattan, and a good friend of Snapper. Ernst, the middle child had lived in America for a year, reading mathematics at Princeton,

thanks to Snapper's friend Abraham Flexner, a celebrity in medical circles through his thorough reorganization of American medical schools. Frits, the eldest son, an economist and military man, had remained on duty in The Netherlands. To the rest of the family they had said goodbye, not for long, as they would come back. The leave was temporary after all.

On the way to Beijing, they travelled around the world in fifty days. First they went to New York. The plan was to embark on the ocean liner *President Roosevelt* in Southampton. But snow storms forced the two of them to remain in London. After several days waiting they were able to board the *Franconia*, operated by the Cunard Line, built in 1922 at Clydebank, Scotland. She had a long life and served during World War II as a troopship.

In New York Snapper made a stopover and took time to meet several people that would later become useful. He was introduced to his predecessor at PUMC, Francis Dieuaide, and had a luncheon conference with Edwin Lobenstine and cardiologist Alfred Cohn, respectively chairman and member of the China Medical Board, the managerial and administrative board of the Rockefeller Foundation in China.

From New York the Snappers continued their journey by *Canadian Pacific Railroad* to Vancouver in order to sail from there to the Far East. Once more snowstorms forced delay of the train's departure for several days.

On January 21, 1939, the Snappers eventually left Vancouver. They first went to Yokohama in Japan, on board the *Empress of Russia*, operated by the Canadian Pacific Line, a beautiful ship with a white hull and three yellow funnels. Just like the *Franconia*, it would serve as a troopship during World War II. Shortly after arriving in Yokohama, they took the train to Kobe, where they crossed to the Northern-Chinese port town of Tianjin on a Japanese ship. The last leg of their journey was by train to Beijing. The route via Tianjin was an unavoidable detour according to Snapper, who was unwilling to travel via Shanghai because of a rumour of an outbreak of cholera.

The whole journey had taken considerably more time and money than originally anticipated. Snapper's request for additional payments was declined. Trevor Bowen, financial controller of PUMC, would not approve. 'It was your choice to travel around the world during winter time and moreover during war time instead of using the direct connection via the Trans-Siberian Railroad', he wrote to Snapper.²¹ However, Snapper did not accept this. In a long letter he

outlined that he had been at the mercy of adverse meteorological events, had to avoid Shanghai due to outbreaks of cholera and the consequent grim prospect of quarantine. He stressed that these decisions were not solely his own, he was also advised by others. Moreover, Henry Houghton, Director of PUMC, had forbidden him to take the direct route via Shanghai, not so much because of the cholera outbreak but because of the unsafe situation in areas of China occupied by the Japanese.²² More letters followed which did not, however, result in a change of the standpoints of either party. Snapper made it clear that he had hesitated to raise financial issues right at the start of his career at PUMC but felt it to be a matter of principle.²³ Eventually the conflict was settled and Snapper received a payment for the extra costs and salary. But the tone was set. He was not to be trifled with. Who did they think he was?

AMSTERDAM

2 THE YOUNG PROFESSOR

Thorough physical examination of the patient

Snapper was 30 years old in 1919 when he was appointed Professor. Not a record in his discipline, at least not elsewhere in the world. William Osler, Snapper's role model, author of *The Principles and Practice of Medicine*, the first textbook of Internal Medicine, became Professor in Montreal when he was only 25. 'Baby Professor' he was called;²⁴ it was not that bad with Snapper. Snapper had heard about Osler from the lectures of Pieter Pel, Professor of Medicine at the university hospital in Amsterdam, the Binnengasthuis or 'BG'. Pel had been his principal teacher. Snapper was fortunate to be resident in the BG, where the teaching was superior to that in other hospitals in the city. Moreover, Pel was the author of several books on diseases of the stomach, liver, kidney and heart.²⁵

Pel (whose name was eponymously coined with the fever of Hodgkin's disease 'Pel-Ebstein fever') had trained in Leiden under the guidance of Samuel Siegmund Rosenstein, from Berlin, who was appointed by the Dutch prime minister Johan Thorbecke, initially in Groningen and later in Leiden. Rosenstein was recommended by Ludwig Traube, his teacher in Berlin, who had declined an invitation for a post in the Netherlands. Thorbecke's aim was to raise the level of medical education in The Netherlands. He had come across Traube in his search for eligible candidates in Germany, the epicentre of major developments in medicine at the time.²⁶ German Professors had already been appointed in Dutch universities. Willem Nolen worked under Rosenstein and later succeeded him at Leiden. Nolen, in turn, taught Professors Willem Kuenen, Abraham Hijmans van den Bergh and Leonard Polak.²⁷

Pel had been under the influence of Osler and his ideas about clinical medicine: the discipline had to be taught at the bedside and could not merely be learned from books. In his inaugural address, in 1883, appropriately titled: 'On the value of bedside teaching', Pel made his point clear about the importance of the training of medical students on the wards, by the patients' bedsides. In addition, he believed that

medical training should have a firm scientific basis. His opinion on the role of the clinical training in this process was explicit:

Whereas in modern clinical science the results of natural sciences are increasingly being applied by the bedside, the invaluable importance of unbiased observation of the patient should always be born in mind. This is the only way to study the essence of diseases and the interrelation between phenomena and symptoms.

In the context of the above, Pel described the duties of a Clinical Professor as follows:

The Professor should never fail to demonstrate himself the different methods of the bedside examination, in order to impress on the students the demands and necessity of a full examination of the patient. A Clinical Professor should therefore examine the patients in every different aspect: by percussion, by palpation, by analysis of the blood, and, if appropriate, demonstrating findings of specimens by microscopy. He should examine the larynx, use the ophthalmoscope and investigate the nervous system when necessary. In other words, leading by example in performing all methods of examination himself, he shall demonstrate to his students the necessity of a full and methodological way of patient examination.

Whereas in the past the role of the patient in medical training was limited to serving as an example or illustration of a theoretical concept of disease, Pel placed first and foremost in order of importance the thorough examination of the patient. Snapper would follow in his steps exactly. It was the start of what would become known as the 'Amsterdam School of Internal Medicine'.²⁸

Pel had a keen eye for all aspects of the patient and it was to his regret that more specialization increasingly came to dominate: 'Sometimes we spend more time treating a diseased organ than a diseased human being', he would remark. It was his comment on the so-called reductionism, the loss of overview of the patient as a whole. Developments in the field and the application of new technological inventions were also received by Pel with the same feelings of unease because of the prevailing reductionistic approach. Many of his contemporaries did not know how to handle the new knowledge, something which seemed to concern Pel.

Undoubtedly Pel was Snapper's role model. He had acquired a tremendous amount of experience over several decades and knew all

the European clinicians of repute and—in Snapper's words—'spiced' his clinical demonstrations with many historical anecdotes. Nevertheless, Snapper was not always of the same opinion as his master and sometimes he even had doubts about Pel's diagnoses. He had the courage to confront his teacher, which was quite unusual at the time. After one of his clinical demonstrations, Pel became aware that one of his younger residents had a different diagnosis in mind. Next morning, he presented the same patient again. 'Mister Snapper, I heard you think this patient has a subphrenic abscess—a pus collection between diaphragm and liver?' 'Yes indeed, Professor', replied Snapper and came to the bedside, asked the patient to sit upright in bed, took him by the shoulders, and shook him vigorously. In all corners of the audience hall the typical splashing sound of a subphrenic abscess could be heard, confirming Snapper's diagnosis.

Shortly afterwards, Pel became ill; he was diagnosed with a malignancy. What he regretted most was the loss of all his knowledge and experience. It is said that he had told his hairdresser: 'Maybe there is a young doctor, a Jewish boy, who can take over from me'. Pel is said to have shared this opinion with the directors of the university. Pel passed away on February 15, 1919.

The ideal candidate?

Snapper's appointment did not go without a fight. Since 1917 Snapper had worked in the BG hospital. He was 28 years old at the time, had obtained his PhD, and was the father of three children. On September 16 of that same year, he secured a temporary appointment as 'extraordinary assistant' with a salary of 200 guilders per annum. By January 15, 1918, he was already appointed 'second assistant', increasing his annual salary to 600 guilders, a substantial increase.²⁹ Obviously, he had to work hard in return. On top of the clinical work, he was responsible for medical supervision of the residents of the Saint Bernhard home for the elderly, located around the corner from the hospital, at Oude Turfmarkt. The afternoons were spent in the laboratory of Rudolph Saltet, who was Professor of Public Health, Hygiene and Medical Police. Saltet introduced him to the up and coming discipline of Social Medicine.

In any event, there was no spare time for boredom. It was also an excellent place for maintaining physical fitness: ward and laboratory were separate and connected by a system of many corridors and

staircases. A year later, on April 19, 1919, Snapper was promoted to 'interim consultant', to cover Pel's vacancy. The salary now rose to 3,000 guilders annually. His time of being an assistant was over.

He was charged—together with Johannes Stumpff—with the task of delivering the Pel lectures. Stumpff, who just like Snapper had made an impressive career at a young age—he was physician director of the BG hospital—published many articles on topics of Internal Medicine and had been awarded an honorary degree in 1920 by the University of Amsterdam.

The Faculty of Medicine in Amsterdam had two chairs of Medicine; in contrast to only one in the corresponding faculties at Leiden, Utrecht and Groningen. Pieter Ruitinga, who like many others at the time had started his career at the Department of Pathology, was appointed in Amsterdam in 1903 as Professor of Introduction to Internal Medicine, General Pathology and Pharmacodynamics. Ruitinga, an amiable person much loved by the students for his teaching abilities, took over the position held by Pel—his father-in-law—as Professor of Medicine, leaving his previous post vacant. The University of Amsterdam was a municipal university and therefore Ruitinga's succession was discussed by the City Council. When the Council recommended Snapper's appointment, the Faculty of Medicine raised objections:

It is the faculty's opinion that it is not advisable, both from the perspective of teaching and the good reputation of the University of Amsterdam, to have such a young man as a Chief of Medicine in one of the largest and most prestigious Departments of Medicine in the Netherlands. A promising young man, it was acknowledged, but despite high expectations for the future, he was deemed to be unsuitable.³⁰

Consequently, the University started looking for other candidates, preferably with international fame, in line with the ambitions of the University of Amsterdam. But the search was not successful. For example, Karel Wenckebach, from Groningen, who had been the predecessor of Hijmans van den Bergh, was an excellent candidate, but a couple of years earlier he had moved to Vienna and was not willing to give up his post, despite the political unrest in the young republic of Austria that followed the end of the Great War. Hijmans van den Bergh who had recently moved to Utrecht and Polak Daniëls who had taken over in Groningen, were not available for the same reasons.

The City Council turned its attention back to Snapper. His career thus far was outstanding: he had passed his PhD degree with honours, had spent a year as a research fellow in the Imperial Cancer Institute in London and was the author of numerous publications. In addition, his career had progressed with lightning speed in Amsterdam and he had received high marks from Pel. That made him number one among the nominations. Second on the list was Dirk Klinkert, from Rotterdam, son of a famous physician, like Snapper trained at Groningen and having worked there as a first assistant under Wenckebach. But Snapper, son of a diamond worker, got the post.

On May 27, 1919, Snapper was appointed by the Amsterdam City Council as Professor of General Pathology, Introduction to Medicine and Pharmacology, as successor to Ruitinga. This was evidently a chair too large for a young, inexperienced Professor. In fact, a new chair for Pharmacology was urgently needed but that required a new laboratory. It would not take long before a chair of Pharmacology was created.

The annual allowance of the young Professor was 8,000 guilders and could rise to 10,000. In a short time his income had increased more than forty-fold. He had two assistants, Constant Delprat and Willem van Bommel van Vloten, who were of the same age.

Brilliant student

Snapper had been admitted to medical school in Amsterdam, at the age of only 16. The Medical Faculty of the University of Amsterdam was the largest in The Netherlands. The *Athenaeum Illustre* became a university in 1877 and the number of students had increased since.³¹ At the time of Snapper's admission there were about 500 medical students, the majority male, about 10% female. The tuition fee was 100 guilders annually, compared to 200 guilders at other universities. His parents could afford it.

Students were attracted by Amsterdam thanks to outstanding teachers like anatomist Louis Bolk,³² gynaecologist Hector Treub,³³ surgeon Otto Lanz, internist Pieter Pel, neurologist Cornelis Winkler, dermatologist Samuel Mendes da Costa, radiologist Johannes Wertheim Salomonson, and Rudolph Saltet, Professor of Social Medicine.³⁴ The lectures were given in the old city centre: in the buildings of the Zoo, Artis, the Jonas Daniël Meijerplein and in the BG hospital. Snapper was not a member of a students' union, understandably given his age and background. On the other hand, he applied successfully for membership

of the medical debating society '*Bis Repetita Placent*'. This society convened on a regular basis, sometimes at home of one of the professors, to discuss medical topics.

The study books were in German, for example Strümpell's *Lehrbuch der speziellen Pathologie und Therapie innerer Krankheiten*, published in 1883 and reprinted several times since. Adolf Strümpell had visited Amsterdam in 1905 and gave lectures and clinical presentations. Every student could easily follow the presentations which were delivered in German. In his presentations he had selected two patients with a neuromuscular disorder who happened to be admitted to Pel's medical ward.³⁵ Internal Medicine was a broad discipline at the time, also including Neurology.

On June 10, 1908, Snapper passed the Bachelor examination. For his oral examination in General Pathology by his future colleague Pieter Ruitinga he received a 'good', as he did for Anatomy, Histology and Pharmacology. For Physiology he was awarded an 'excellent'. Pel was impressed by Snapper as a student, and supported him in his application for a scholarship of the Stokvis Study Foundation, named after the Amsterdam Professor of Medicine, Barend Joseph Stokvis, Pel's predecessor.

After his residency in Internal Medicine he spent six months at the Imperial Cancer Research Institute, at the Victoria Embankment in the centre of London.³⁶ He had reached the age of 20 by then. The Institute for Cancer Research was founded in 1902 like many others all over the world; the Netherlands Cancer Institute followed in 1913.

Snapper worked under Ernest F. Bashford, Director of the Cancer Institute.³⁷ The idea of arranging a scholarship with Bashford had occurred to Pel, or maybe to Snapper himself, after a presentation by the German Nobel laureate Paul Ehrlich, in June 1908, at the auditorium of the University. Ehrlich, pioneer and authority in the field of immunology and chemotherapy, had discovered Salvarsan, the very first drug against syphilis. At the time, there was no treatment available for syphilis, which was endemic. During his lecture on an overview of current cancer research, he had mentioned Bashford's name several times.³⁸ Bashford, an inspired and brilliant man and former student of Ehrlich in Frankfurt, had, by the age of 29, succeeded in turning the Institute into the Mecca of cancer research in record time, attracting visitors from all over the world.

This was Snapper's initiation into the field of scientific research. He learnt the principles of systematic research by studying the rejection of tumour implants in mice. Cancer research at the time

was notably focused on the role of the immune system in the origin and growth of malignant tumours. But Bashford was also a man with many interests. He inspired Snapper's enthusiasm for geographical pathology, the discipline of the study of the spread of diseases within populations, one of his favourite subjects, and to cancer as an occupational disease.

It was not only the practical experience in London that would prove to be very useful in Snapper's future career, but also the mere fact of having been selected for a scholarship abroad that gave him a head start. By then, an academic career was no longer determined by background and money, but notably by talent and merit. Not to mention the enormous experience of being away from home, alone, in a metropolis, as a 20-year-old.

Back in Amsterdam he had to complete his internships in the other disciplines. On July 6, 1911, he passed the medical qualification examination. Times in medicine were exciting. 'Our knowledge has increased enormously over the years, our armoury of resources expands by the day and is becoming more and more perfect, and our deeper insight into the causes, the roots and the treatment of disease processes demonstrates a great progress', Pel had argued in his inaugural address at assuming the chair of medicine in 1883.³⁹ How did that compare to 1911 when Snapper started his medical career?

First steps as a doctor

Snapper's start in the medical labour market was not problem-free. After having passed his exams, he could have become a Fellow in the Department of Surgery headed by Professor Otto Lanz, a native Swiss. The concept of applying for a job in medicine was non-existent at the time; one was invited and subsequently 'admitted' to a department. Surgery had become a popular specialty, it developed rapidly due to the progress in the disciplines of Pathology, Bacteriology, Radiology and Hygiene. It was becoming increasingly possible to eliminate causes of disease when located in an organ, based on the medical understanding at the time.

As a result of asepsis and antisepsis, surgery became safer. It had not been long when the majority of patients died after surgery due to bacterial wound infections. In particular, as a result of Lanz' intervention, who was very strict in implementing preventive measures, postoperative mortality had declined sharply in The Netherlands. The introduction of anaesthesia by ether instead of chloroform making it

possible to operate under general narcosis, increased the status of surgery within medicine.⁴⁰ As techniques also improved, the indications for surgical procedures like appendectomy for abdominal discomfort or tonsillectomy for sore throat, broadened. Tuberculosis, endemic in the population, came under the domain of surgeons, who performed procedures like artificial 'pneumothorax'. This involved letting in air into the chest cavity by removing one or more ribs in order to collapse the diseased lung. The treatment thus far had been limited to prolonged bedrest.

In brief, surgery had gained momentum, and Snapper, deeply impressed by a man like Lanz, had decided to become a surgeon. Even Pel, the internist, Snapper's favourite Professor, was impressed by the progress of surgery:

In contrast to the commotion about the remarkable advances in surgery, the stillness in medical therapeutics is rather striking, although there is general agreement about the progress in diagnostic procedures, resulting from improved research methods.⁴¹

The diagnostic modalities had improved greatly through better bacteriological and radiological techniques, but medication was only available for a limited number of disorders. To mention the most important drugs: aspirin, nitro-glycerine and digitalis for cardiac diseases, desiccated thyroid powder and iodine for thyroid disorders, ether and barbiturates for anaesthesia, and Salvarsan, for the treatment of syphilis.

Otto Lanz was an exceptional man. He had a keen eye for elucidating the function of organs revealed by surgery. Thus, after an organ had been removed on medical indication, he explored the changes that occurred in the patient. Lanz was also a serious art collector, known as 'the best expert on art among the surgeons and the best surgeon among the art experts'. The Dutch artist Jan Toorop made an impressive painting of Lanz in 1927. The second Department of Surgery in Amsterdam, headed by Professor Jacob Rotgans, was less attractive to Snapper as the emphasis there was on Traumatology.

But Snapper would never work in the clinic of Lanz. Young doctors had to spend the first year of their surgical career in the laboratory.⁴² Snapper refused as he had ample laboratory experience during his apprenticeship in London. Instead, he wanted to work in hospital, and use the surgical knife. Initially, Lanz had agreed that Snapper, thanks to his previous experience, did not need to spend more

time in the laboratory. But Lanz revoked his decision. Snapper—then 21 years old—had the courage to say no to the famous Professor and did not become his assistant. In later years the relation between the two men would turn out to be fine as Snapper asked Lanz to perform the first parathyroidectomy (removal of the parathyroid glands) in The Netherlands. In 1935 Snapper was one of the speakers at Lanz's memorial service.⁴³

An incidental meeting at a railway station got Snapper's career going again. Hector Treub, Professor of Gynaecology and Obstetrics in Amsterdam, advised the unemployed Snapper to try for an interview with Benjamin Kouwer, a colleague of his in Utrecht. Kouwer, a man of high authority and standing, although a Roman Catholic, was gynaecologist to the Protestant queen Wilhelmina.

Snapper took this advice to heart and wrote a letter to Kouwer. This move was less incongruous than it seems as the differentiation between Surgery and Gynaecology was far subtler than nowadays. Gynaecology was just beginning to separate from Surgery and in due course would become a specialty in its own right.⁴⁴ He could start in Kouwer's clinic right away. But from the very first day he faced difficulties. Snapper had learnt the basic principles of Obstetrics from Treub in Amsterdam. However, Kouwer did not want to have anything to do with a man like Treub. Any of Snapper's suggestions for treatment or diagnostic procedures that seemed even only remotely to originate from the 'French' school of Treub, were deemed wrong and aroused rage in Kouwer, a strong believer in the German school of Obstetrics. In addition, Kouwer was old fashioned and did not appreciate new initiatives. After six months Snapper decided to terminate his obstetrical career.

Now there was a problem. What did Snapper want? To rebel against a prominent Professor of Surgery and leave a renowned university hospital? The Dutch academic world was small, with only four medical schools. Moreover, Snapper was known to be hot-tempered, an undesirable quality at the start of one's career. Everyone knew each other, and Lanz and Kouwer were influential men. Kouwer seemed even to have said that he would see to it that Snapper would never make a career in medicine: 'They should send him to the Dutch East Indies with 'H.H.H' written on his back (Hold Him Here)'.

The family provided the solution. His father-in-law—Snapper had become engaged in the meantime—was an old friend of Hartog Jakob Hamburger, Professor of Physiology in Groningen, in the north-