

SURGICAL AND OTHER OCCASIONS:  
A SPORADIC MEMOIR

By Arthur J Helfet (1907 – 1989)

Edited by Roma Schneider

1988

# Foreword

Arthur Jacob Helfet was born on 19<sup>th</sup> February 1907 in Calvinia, a small isolated rural town in what was then the Cape Colony, later to be a part of the Union of South Africa. He attended the University of Cape Town where he gained a B.Sc. in 1929 before undertaking a medical degree in Liverpool, England where he graduated in 1932. He then specialised in orthopaedics, becoming a noted orthopaedic surgeon.

Arthur served with the British Army in the Second World War, rising to the rank of Lieutenant-Colonel and the Orthopaedic Advisor for the Allied Middle East Forces. He also played a distinguished part in the Israeli War of Independence in 1948 where he was the First Consulting Orthopaedic Surgeon to all the Medical Services of the newly created Jewish State.

In the 1950s Arthur established a successful private in Cape Town, South Africa, before taking up the Chair of Orthopaedics at the Faculty of Medicine of the Albert Einstein College of Medicine at Yeshiva University of New York, USA in 1962. Owing to an accident to his wife Natalie, Arthur reluctantly returned to South Africa in 1970 where he continued to work in private practice and research.

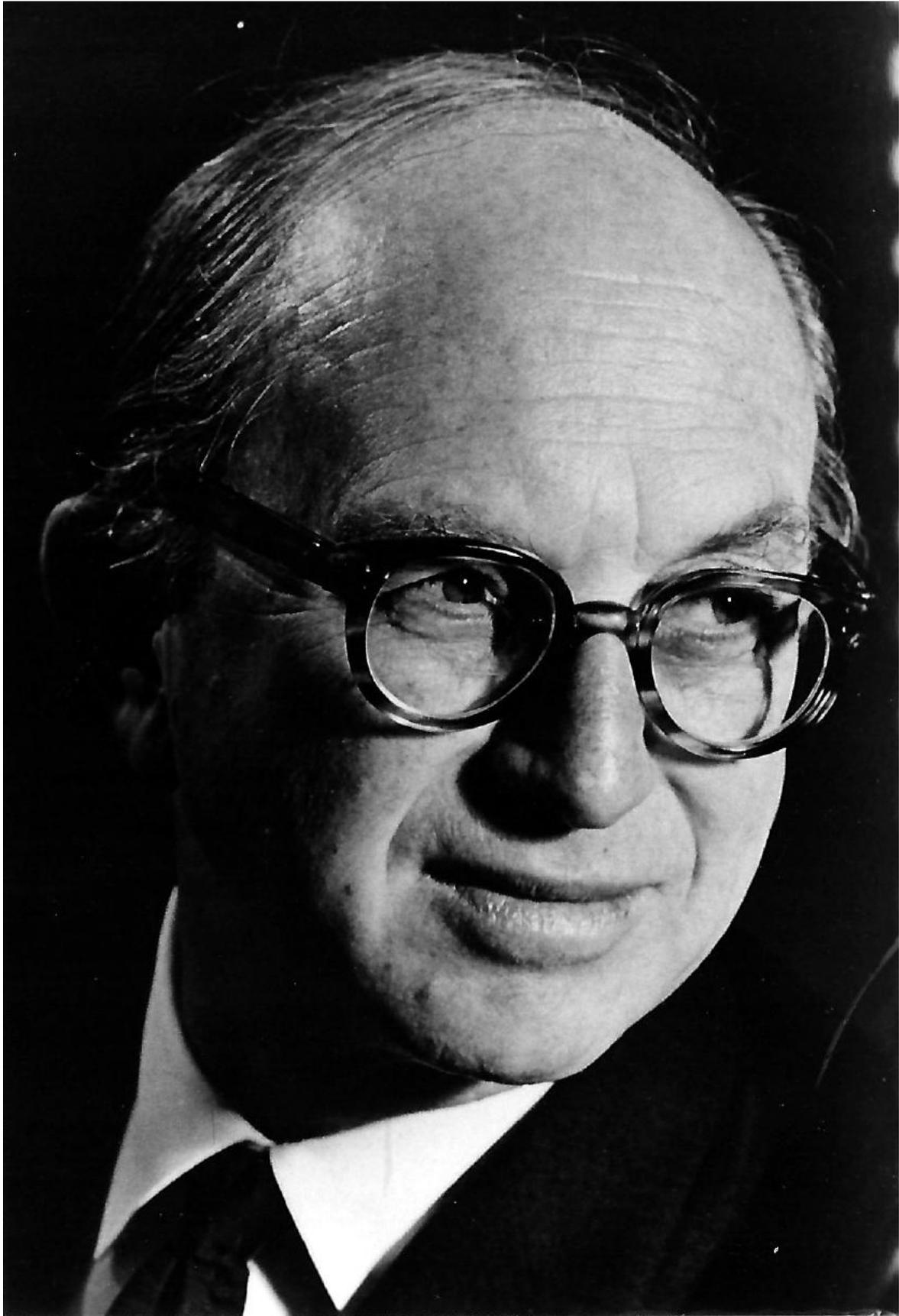
A prolific author and inspiring educator, Arthur's story is one of medical innovation and success underpinned by hard work and a dedicated commitment to his chosen profession. His memoir is a fascinating insight into the man, his profession and his times. Arthur passed away in New York, USA on 10 October 1989.

His autobiography was privately printed Cape Town in 1988 in a very limited edition for friends and family. Arthur's nephew Jon Helfet in London kindly photocopied and made available to me the typescript which I then converted into a text-readable PDF. For anyone interested in the Helfet family history, Arthur's family page is [here](#). From this page other family member pages can be accessed by clicking on the relevant links.

Jeremy Hodes PhD (Arthur's 1<sup>st</sup> cousin 2x removed)

Albury, NSW, Australia

June 2025



*Figure 1 Arthur Helfet*

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## Chapter I Days of Yore

My youth was spent in a country village or 'dorp' in the northwest Cape Province, 250 miles from Cape Town. Situated on a wide plateau some 3000 feet above sea level and surrounded by the impressive Hantam range of mountains, Calvinia was a typical South African village of the time.

The spire of the Dutch Reformed church, built in the 1840's, towered above the white-washed houses and was a focal point for miles. The village hall nudged the wall surrounding the pastorie, or residence of the minister and was separated from our home by a road.

Three hotels, each with a bar, were assembly points for the young bloods and some of the older citizens who enjoyed a beer or brandy after work. In the middle of the village a helpful Greek settler had built and presided over a meeting hall, used for dances, and where once a week he showed a movie, a popular occasion. I still remember the excitement of the 'treats' when, as youngsters, we were taken to see Douglas Fairbanks Senior in 'Robin Hood' and the 'Mark of Zorro' and we became the passionate fans of the incomparable Elissa Landi. The glamour of these two artists lingers with me to this day.

Community life was simple and gatherings were mainly for purposes of religion or for sport and these would usually conclude with a barbecue in the veld and dancing to mouth organs much like the celebrations portrayed in movies of the American Mid-West. For the young, picnics and mountain climbs, occasional dances and the weekly cinema show made up the roster of healthy entertainment. The surrounding mountains were a challenge which we as teenagers had no difficulty, and indeed enjoyed climbing.

We were five children in the family-four boys and a girl, with myself as the oldest. My father's family were originally from Russia. Because of the conscription of young men which condemned them to 25 years in the Tzar's army, my father's parents sent him at the age of twelve to an aunt in England. He never saw them again. In Liverpool, the young Leon Helfet attended an evening school where later he met Sarah Levin, an attractive young pupil teacher who taught him English. While still at school he decided that he would marry her and, with her promise to follow him to mysterious Africa, he left for South Africa in 1897. From Cape Town he eventually made his way to Calvinia where he settled. He applied for naturalisation and, with the outbreak of the Boer War, volunteered for the Citizen Force.

His nightly duty was to patrol the road out of the village. On one occasion, with a group of young men he was sent up to South West Africa to herd some hundred of mules across the Orange River to the Cape. After the war he built a house 'Carmel Villa' and then sent for my mother. When she arrived in 1905 they were married in Cape Town. After a short honeymoon on beautiful False Bay, they travelled by train to Klawer, and by covered wagon and six horses for the remaining 100 miles, camping out every night. One evening my father gave the driver a shilling to buy fruit at a nearby farm and my mother was astounded when he returned with an enormous basket of luscious grapes, to her English eyes in those days, unheard of bounty.

She was received with acclaim in Calvinia where her knowledge of English literature made her much sought after and she soon had a regular group of local ladies for convivial tea-and-culture parties. Once a week, after doing my homework I would escort my mother and leave her at the house of one of her cronies for chatter and sampling of the cakes and puddings prepared for the occasion. For the men, life was austere. Droughts, the price of wool, sheep, skins and wheat determined the level of well-being. During the frequent droughts the businessmen and the bank manager would respond to the entreaties and carry most of the farmers till the next better season.

In 1913 my mother took her brood of three sons 'Home' to be presented to the family in Liverpool. Although this longed-for holiday had been planned as a six months stay, she curtailed the trip after only three to return gladly to dry, sunny South Africa.

One valued acquisition on this expedition was Nanny Corrigan, an Irish martinet, originally engaged to help cope with us three handfuls' on the return voyage. A hospital nurse by training, Nanny Corrigan, who became a well-loved member of the family, marshalled us strictly but fairly for the next seven years. She was a 'frightfully British lady who never learnt to speak Afrikaans. Shortly after her arrival in Calvinia she was outraged when, on serving coffee to a visiting farmer, he said to her: 'Buy a donkey. It was hastily explained that he had in fact said: 'Baie dankie many thanks.

During the Boer War and again during World War I Calvinia housed a military headquarters. In the early stages of the latter a group of anti-British, pro-German forces under General Manie Maritz rebelled in the area. I was seven at the time and remember, when they first marched out of the village, my father took me to bid them farewell, and how proud I was to shake Maritz's hand. General Smuts arrived from Cape Town to retrieve the situation, the rebels were captured and the leaders imprisoned in the village gaol. My father, everyone's friend and concerned for all, was worried that Maritz and some of his men were not adequately fed, and I would walk with him to take food and reading matter to the prison.

During the uprising Martial Law had been proclaimed in the area. My father served once again in the Home Guard while my mother and her by then four children were despatched by covered wagon to 'safety' in Ceres some 140 miles away where we were housed in a hotel for almost six months. Nanny Corrigan, torn by the thought of possibly wounded soldiers, submitted to accompanying us only because my infant sister presented a more pressing duty. After the war some of the English and Scots soldiers returned to settle.

The relationships between whites of different backgrounds and culture in those days was warm and friendly, except for a small section of Afrikaners who nourished the bitterness engendered by the Boer War. But even that was mollified by the community spirit of the village and region where all called themselves the 'North Westers'. Years later, before World War II, the country was rent by nationalism. Those who supported Smuts in joining the Allies against Germany formed the 'United Party' as opposed to the 'Nationalists' led by Dr D.F. Malan and General Hertzog. An unhealthy division has persisted to this day.

Dr Malan had been Dutch Reformed minister in Calvinia and, living across the street, a pleasing friendship had developed between him and my father. Most evenings before supper they would go for a gentle stroll, my slight father and the burly Dr Malan deep in conversation along a dusty country road. I was told their discussions ranged widely. My father's education in Russia had been in a 'cheder' a religious school where the main subject was the Old Testament, also an engrossing topic for the minister. Once my father remarked that they enjoyed their conversation but sadly he had not changed Dr Malan's opinions, and the dominie had not changed his. Later Dr Malan became Prime Minister with rigid nationalistic policies the early architect of Apartheid. However, in our experience he was always amiable in his personal relationships.

His second wife, Maria Louw was a Calvinia girl, my senior at school by a few years, who became a friend of my mother's. She was one of a family of eight, the younger siblings contemporaries of the five Helfets with a Louw in each of our classes. Our fathers were good friends so the family relationship was warm and I have happy memories despite the political differences.

When he was Prime Minister, Dr and Mrs Malan were the guests of honour at the anniversary celebration of Israel's Day of Independence in Cape Town. My wife, Nathalie and I were in the line-up of diplomatic, government and local dignitaries being presented to them. Before we fairly reached them, Maria spotted me, burst through the line and shouted at her husband: 'Maar dis mos Arthur! Look, it's Arthur! She left her husband to cope on his own while she indulged in excited reminiscences and recollections of many school friends to the consternation of the Zionist ladies who had organised the function along most formal lines.

My father had a general merchant's business in the village. During 1912 the business expanded and was diversified to include a motorcar showroom. He acquired the agency for Ford, operating with Koos van Wyk, the first and outstanding motor salesman in the North West! Koos became so identified with the family that he was nicknamed Koos 'Helfet'.

In those days of isolation and unsophisticated amenities, practical jokes were a major recreation. Both Koos and my father were classical practitioners of this robust art. My father was a member of a 'syndicate' who annually participated in a book of twelve £1 tickets for the Irish Sweepstake. Once, when the telegram service was newly inaugurated, he received a pencilled telegram informing him of a goods consignment totalling 25,000 pounds in weight to be collected at the Ceres railhead. At that time my father was waiting to turn the tables on Billy Holden, the publican who had recently perpetrated a practical joke on him. Billy was also a member of the 'syndicate'. It was simple to adjust the telegram to read £25,000 to be collected at Ceres bank, signed 'Irishsweep'. The wildly excited Billy had stood a generous round of drinks 'on the house' before being gently disabused.

My father was only some 5 foot, 4 inches in height but of dogged courage. I remember my wonderment when he confronted a belligerent giant of a man, to me twice his size and bulk, and by sheer force of will caused him to retreat. I am 5 foot, 10½ inches and at my peak weighed 183 lbs. but am overshadowed by my sons who vary between 6 foot and 6 foot, 2½ inches. To a recent snapshot of the four of us, their reaction was 'Who is the little man in the middle? They did not know my father who died young in 1945. In later years old farmers would bring a glow to my mind when they related tales of his generosity and many kindnesses to them in days of drought and stress.

In 1953 at the centenary of the school I was invited to be one of the guest speakers. By then language and political apartheid had already given rise to unpleasantness and bitterness in some quarters, but each speaker referred to the good old days of amity and in turn related and lauded some occasion of my father's helpfulness and kindness as well as reciting his communal achievements.

Among the early developers of the village, he and his contemporaries in evening conversations over coffee and 'boerebeskuit', country-style rusks, on the stoep, would reminisce about the parts they played when first they built a dam and piped water to the village, planned roads and introduced street lighting, and initiated the sports fields and golf course. As well, my father was a prime mover in founding the Municipality, the Chamber of Commerce and in building the synagogue. When a Hollander founded a newspaper, 'Die Noordwester', Calvinia was indeed into the twentieth century.

The Jewish congregation numbered some 100 souls and much thought and care was put into building a handsome house of worship. When in course of time the Jews all left the area, either by age and translation to the cemetery, or to follow their children to the towns, the synagogue was handed to the State and is now an attractive cultural history museum, a reminder of the contributions of the waves of European immigrants to the progress and culture in the country.

In retrospect I am still amazed at the honesty of the people of the village. Each year for the school holidays over the hot summer months my father would send my mother with the children to the seaside on the False Bay coast. My mother and the younger children were usually away for three months while the elder boys returned to school after six weeks. On leaving for these excursions we did not feel it necessary even to lock the doors of the house and never once on our return did we find anything missing. Unfortunately this is no longer possible.

As soon as my father could afford it, he bought a farm which was his great love. He bred sheep and grew lucerne or clover. This was piled into stacks to feed the animals during the repeated droughts. At the farm in the holidays we enjoyed riding across the veld and, after rain, when the river had sufficient water, we had a boat in which we learnt to row.

In the village the relationship between the whites and the 'coloureds' was feudal in character. Although many employees lived in houses attached to, or in part of their employer's home, most lived in an extension of the village called a 'location'.

My father employed three generations of the Faro family, all of whom were disciplined by the grandfather, and strictly at that. Proud of his offspring, he permitted no dereliction of duties or lapses of morals or manners. On the other hand, my father, besides paying wages, assumed full responsibility for their welfare, for the children's education and apprenticeship as mechanics, carpenters, gardeners, etc. In turn they gave us unstinted loyalty and service. I never heard my father use a harsh word to any of them.

Jan Faro, a son, taught me to drive, and took me to the farm in the school holidays, where he also taught me to shoot. We would go walking or hunting together in the veld. I was a poor shot. I managed to bring down a few wild duck, but could not pull the trigger on a buck because the first one I had in my sights looked just like 'Bambi'.

On an organised hunt on a neighbour's farm, some of which were vast, the participants would advance in strict line abreast. No one was allowed to point a gun laterally or backwards. I enjoyed these hunts more for the long walks in the beautiful spring or autumn veld with its seasonally incredible carpet of colourful wild flowers than for the actual shooting. We started early in the morning and by lunchtime would stop to picnic. The farmer had arranged for his staff to light a fire for barbecuing the meat which was brought in great baskets. After the long walk the aroma of the grilling lamb and sausages would establish enormous appetites and sitting round the fire listening to tales, some true, some unbelievable, was most enjoyable.

In winter the nights were very cold and by morning the land was usually white with frost. Willem van Wyk, the farm manager, would wake me before dawn for a freezing ride to check the sheep stations. The main menace in the veld were snakes. The puffadders and Cape cobras are large and especially frightening. When balked for any reason, they lunge, fangs bared and spitting poison. Van Wyk treated them without respect. He had a keen eye and a talent for spotting. He would stop and kill and then string it over a bush. I remember a morning when I rode across the veld and did not see a single snake, but a day later, on the same route, there were a number of dangerous specimens draped over the bushes.

On one occasion, after good rains, my father and I were driving in a cart and two horses to inspect the irrigation channels. The snakes had been forced out of their holes by the rising water level. Suddenly an angry great six foot cobra came up from below the ground, made straight for the cart, saw the horses, put back its head and lunged at the back legs, spitting venom. The horses bucked and sidestepped. It missed and disappeared down a hole. We stopped to call one of the labourers to

warn his friends about the snake and pointed out its hole. On our way back a few hours later, there was the snake, strung over a bush. The labourer, in his bare feet, had dug the snake out and decapitated it. Like the farm manager, he did not share my horror of reptiles but I never lost my dread of these serpents.

Primary schooling was not memorable compared to outdoor attractions. An early venture in public singing was brief. Kindergarten each day started with a singing class. The second had hardly started when the teacher stopped us. "There is someone false here. Who is it?" She waited. I had no idea I was the culprit. In turn each of us had to try the tonic sol-fa scales. I had reached 'mi'. She put her hand up. 'You're it.' Which ended my singing career. After that I was banished to sit in the sun each morning, much to the envy of my fellows.

Sport in the country districts was not the obsession it became in later years and was primarily approached as a relaxation. My more robust farm-bred schoolfriends determined me to train hard and I eventually made the first rugby team and captained the cricket.

In the 1920's Calvinia School had splendid standards, with results comparable to the best in the Union due in large measure to the remarkable talents of the principal, Dr. AJ. van Rhyn. Born on a small farm in the Orange Free State, he was educated at Stellenbosch University followed by a degree in chemistry at Heidelberg in Germany. A born teacher and administrator, on his return to South Africa he was appointed to what might have been considered a backveld school but which his vision and skills improved immeasurably and which I was fortunate to attend. On leaving the school he joined the National Party, became editor of 'Die Volksblad', a national newspaper, and eventually a cabinet minister. As an inducement, he offered me a prize of £5, then a significant sum for a schoolboy, if I achieved leadership in the national matriculation exam. I did, but never received the £5 an early disillusion! Besides those mentioned elsewhere in this account, among the pupils of the school who distinguished themselves were 'Apie' van der Merwe, later Moderator of the Dutch Reformed Church in South Africa, 'Callie' Visagie, a future Chairman of the Wool Board, 'Koos' Strauss, afterwards Leader of the Opposition, Anna Louw, recognised as a leading Afrikaans poetess and the significant composer, Arnold van Wyk an unusual number from a small, remote country school. An alumnus of earlier vintage was Leopold Greenberg who became a distinguished Judge of Appeal.

Before we met Nathalie hardly knew of the existence of Calvinia, but after our marriage was astonished at the large number of people, all seemingly from the village or who had been in the area. She was convinced that the name shielded a secret metropolis.

The second Christmas after my return from World War II, we set off from Cape Town in a car from surplus Army stock which I, as a returned ex-serviceman was entitled to purchase in those days of scarcity. With our lusty three-year-old Anthony we drove through the winelands of Paarl and Stellenbosch, over the majestic Mitchell's Pass and debouched into the nearly 200 miles of arid Karoo.

To our surprise, at a farm 'Soetwater' some 20 miles from Calvinia, we were received by a warm gathering of old schoolfriends and acquaintances. My brother who was still living in the village had informed the locals! 'Soetwater' was a well-run sheep farm owned in part by Attie Louw, brother-in-law of the Leader of the National Party and soon-to-be Prime Minister Dr Malan, and partly by Frikkie Strauss, the brother of the soon-to-be Leader of the opposition United Party, both of whom were contemporaries from my schooldays. They had arranged a jovial and warm welcoming party at Attie's home. During the party Attie drew me aside and, drink in hand, told me he was 'still a great

friend of Frikkie's, but, you know, he is "Sap", (a United Party supporter). A little later Frikkie collared me - Attie was as always, his friend, but, you know, he is a "Nat", a symptom of the schism which had formed in the country and was the reason for much subsequent friction and unhappiness and ultimately, as one faction embraced Apartheid, statutory international isolation.

The car was loaded with fruit and vegetables, meat and poultry, and gifts of like kind continued to arrive for the ten days of our visit. The village had hardly changed or progressed in the intervening years - a few bigger cars and improvements in the houses denoted the increased prosperity brought by the war.

Academically I had done reasonably well at school and was second in the Union in Junior Certificate, with a first class pass at matriculation. Considering the numbers involved this was perhaps not as much of an achievement as it seems, but it did result in the offer of a King's Scholarship to the University of Cape Town, which made tertiary education during those years of the Great Depression less stringent. Although my father did not find the university easy to afford, he was determined to give his children the best education possible. He asked what I would like to do. From the age of five my urge was medicine, but he advised that before doing so I should spend a year or two at university on non-medical subjects to give breadth to my education and during those years my courses should not include the technical subjects. In later years I was surprised at his wisdom. With a limited education himself, and no experience of universities, he gave advice which, with maturity, I have treasured. Had I gone overseas after the second year of medicine, I could have qualified in five. Instead I started a four-year B.Sc. which, besides Philosophy, Ethics, Politics and Logic, included two years of Chemistry and two years of Physics which were the basis of subsequent research on calcium metabolism, which in turn was of inestimable value in my career and led directly to such other benefits which came my subsequent fortunate way.

Arriving at the University feeling strange and diffident, I looked round and saw another young man also appearing rather lost. We edged nearer each other and introduced ourselves. He was Jack Karpas from Koffiefontein in the Orange Free State, and was to study Medicine. We have been friends ever since. Jack turned out to be remarkably sensible and level headed. After qualifying he became, as mayor, a power in Parow, a small town in the environs of Cape Town. Years after, he left for Israel where he started in general practice, but was soon recruited by the Hadassah organisation, eventually becoming their extremely popular Director.

I was admitted to College House, a magnificent original Cape Dutch house, the premier university residence and the exciting centre of student life. In the first term as a freshman one was expected to do the bidding of any senior. The first cold day of the winter Eric Rush, the likable cricket captain, asked me to light a fire in his room. He had attractive quarters with a big fireplace already laid with lumps of coal. I had never seen a coal fire - wood was plentiful in Calvinia. I was nonplussed by the hard black chunks, but undaunted took a box of matches, lit one and held it under a piece of coal. Only the match burnt. I repeated this a number of times without any greater success. At this juncture Rush walked in, watched my frustrated efforts and asked: 'Haven't you ever lit a coal fire?' 'No' I admitted, 'only wood'. So he called another freshman who, I may add, had to light his fire every evening for the rest of the winter. This taught me a good lesson: never do any stupid chore, if you can avoid it. Years later I was completing a C.V. and under 'Mottoes' wrote, not to my credit, 'Never do anything today that someone else can do tomorrow'.

Sir Carruthers Beattie, principal of the University, was head of College House. Adorned with a well barbered pointed beard, he was and comported himself as an imposing figure. He enjoyed entertaining social lions and, when in 1925 the then Prince of Wales visited South Africa,

unabashedly saw to it that the University honoured him and that College House entertained him to dinner. Gowns were routinely worn for dinner in the handsome hall, but for this occasion black ties as well. Sir Carruthers preened himself and the Prince was amiable, as were we all. It was a first encounter with Royalty.

However, my studies were interrupted after the first year, for the serious economic depression and the prolonged drought had limited the family fortunes desperately. The strain had affected my father's health and I was needed at home. So for the next year I assisted him in the business.

In the eyes of our less sophisticated locals, my year at university had made me a 'master' of medicine and many a morning would-be patients waited to seek my advice. My feeble attempts at common sense were accepted as dictates of absolute dogma.

Apparently I was not cut out to be a businessman and by the next year my father decided I would be less of a burden if I was back at university. One of his friends kindly made me a long term loan.

By this time Smuts Hall, as it was later called, had been opened and I spent the next three years there. This residence, an integral part of Sir Herbert Baker's gracious and dignified design for the university, was on a lower slope of Table Mountain and my room had a stupendous view of the Hottentots Holland Mountains and the sea to the right and the more imposing Drakenstein on the left. In winter these would be snow-capped. Every morning I would pause to gaze and realise afresh the vastness of Africa stretching to the north.

These yours were particularly happy. In all, a group of seven young men formed life-long friendships. Three read Law, including Joel Mervis who became the editor of a leading South African newspaper, the 'Sunday Times', and in politics a member of the Transvaal Provincial Council. Favourite reading every Sunday morning was his weekly column 'The Passing Show', of typical Mervis humour in which he established village and political characters who became traditions in themselves. This satirical column was produced unfailingly for year after year considerable achievement. Michael Comay became an advocate and then followed a career in Zionism. He moved to Palestine and played his part in the establishment of Israel, eventually as ambassador to Canada, the United Nations and the Court of St James. Len Goldsmith practised successfully at the Johannesburg Bar. Apart from Ben Wasserstein who became a geologist, the rest of us qualified in medicine, including Jack Cunard, the rugby star, who had the misfortune to be captured in the Western Desert and was a prisoner of war of the Germans. Saville Paul was Senior Medical Officer to the RAF in the Far East and later Southern Command.

We all played rugby and tennis while Joel also captained the cricket team and, quite in keeping with his offbeat humour, was a googly bowler. It was a time of fun and laughter with late nights of furious study with a wet towel round the head before each examination. There is no doubt that university days, if one is fortunate, can be among the best in one's life. One is free, unencumbered and, with unsullied friendships, the world seems one's oyster.

## Chapter II Rugger Buggers and Much Fun

In January 1930, a round dozen of young men, travelling steerage, left on a Union-Castle mailboat for Britain to continue medical studies in Edinburgh, Dublin and London. I was the sole candidate for Liverpool about which I had received interesting and encouraging reports. Liverpool proved a happy choice; small, with only thirty in the final year, it included leading schools of radiology, tropical medicine, surgery and orthopaedics. Moreover, it had a good rugby team, although not as well known as Edinburgh and Guy's.

On this and subsequent voyages, I suffered the quirk of seasickness for only the first two days out of port, after which I was untroubled by the ship's movement. In later years, when the anti-seasickness tablets originally produced for the Allied invasion of Europe became available, the sea held its discouraging terrors no longer.

An interesting development gave us cause for thought and possible action aboard. Also travelling steerage were a group of rather unpleasant, rowdy individuals returning to Britain from Rhodesia and Kenya, among them some 'remittance men'. They did not take kindly to the university students and especially to our distinguished Professor Lancelot Hogben, later the author of 'Mathematics for the Million' who was also on board, whose company we enjoyed and whose conversation was fascinating. He was aloof from everyday affairs. Once, when the national anthem 'God save the King' was played, he absentmindedly remained sitting. The grapevine told us that the rowdies were planning to bath him to show their disapproval. We immediately arranged a guard to prevent any assault on his person and dignity and quite looked forward to teaching the troublemakers a lesson! The rumour reached Hogben, who went directly to the captain, who in turn warned the plotters that he would 'clap them in irons' if there was any trouble. There was no trouble and the rest of the voyage was peaceful and enjoyable. We had time to keep fit, to talk and to speculate on our futures.

From Southampton I took train for London to be met by Jack Cunard and Saville Paul and was escorted to their 'digs'. That evening we were introduced to the superb theatre of London: Henry Irving in 'Jew Suss' at the Duke of York's what a night! We finished up at a 'Lyons' where we counteracted the unfamiliar cold by indulging our healthy South African appetites. The burly Jack was shovelling down huge quantities of food. Suddenly he looked up from his plate and rather bashfully, in his still-heavy South African accent said: 'Man, in this country you must eat or you catch TB'. This engaging statement and the manner of its delivery became our catchword for a long time.

The next day, after registering at the Medical School in Liverpool, I attended my first surgical clinic. It was the middle of a miserable winter, and everyone seemed pale and huddled in warm clothes. My sunburnt face, naturally ruddy, must have been a beacon in the murk. The surgeon in charge eyed me enviously and said: 'You must be from South Africa', which I admitted; however I was abashed when he immediately posed a clinical question to which I had to confess ignorance. I could not bring myself to explain it was my first day in surgery.

That same week I took part in the rugby practices and the following found myself in the University's first team playing their arch rivals, Manchester University. I was to hook. Manchester had the outstanding English International hooker, Bert Toft. The ground was wet, I was still wearing short South African studs designed for dry grounds, so could not keep my feet, but slid all over the place and definitely was not a success. This was fortunate in a way for the next match I was changed to the flank, in which position, or as a prop, I played for the rest of my days in Great Britain.

Those first months I remained somewhat diffident and watchful. The team apparently considered I was too reserved and decided to relax my inhibitions. They invited me to the theatre and to sup. Before the play and during each interval they assiduously plied me with whiskey. Although not an accustomed whiskey drinker, my pride determined that I not succumb. My head became heavier but in the end I assisted three of them to bed after which, as I returned to my digs, I was also violently, but luckily privately ill. This and a subsequent such occasion did my reputation a power of good and after that, if I refused a drink, no one questioned it.

A pleasant feature of first class rugby in Great Britain were the team tours, not only locally, but, because the distances were not great, also to other countries. Players were not as specialised as today. The rugby was open and the approach to the game was much to my liking and enjoyment. Moreover, Liverpool was a winning team and it is always pleasant to play with the winners. We won the Universities Championship for the next three years, during the last of which I captained the side. That season we scored 850 points in thirty-six matches, a record for first class rugby in those days.

Cumberland, confident of their rugby prowess, challenged us. In Kendal the match had been advertised as a gala game. The sun was shining and from far and wide Cumbrians arrived to picnic on the outskirts of the ground which was beset by motorcars and tour buses.

Their captain, a famous International, Sam Martindale, had a reputation as a rough and vigorous player. There had been talk of boycotting games with Kendal because of their over boisterous play. When we tossed up, Martindale said: 'Helfet, you keep your lads playing clean rugby and I'll look after mine'. I could reply: 'Sam, you just discipline your team. My team don't need to be told'. In the third scrum a foot with a Cumberland stocking booted one of our forwards. I grabbed it, looked up, and there was Sam Martindale still shouting: 'Keep it clean, Kendal!

We were fortunate that we mustered a brilliant team, including three English International three-quarters and a number from the Lancashire County side of which I later became a member. Wearing the red rose was a proud experience.

In my final two years I was happy to be chosen for the Combined Universities (Universities Athletics Union) team for matches against famous Welsh, Irish and London teams.

Irish rugby was of a high standard. Their players enjoyed 'mixing it', but without malice. Irishman Fred Hore, who shared the front row with me in many a game for Waterloo Rugby Club, looked rather like me. On one occasion he received a biff, probably meant for me. I said to him: 'Sorry Fred, that was aimed my way'; to which he replied: 'Don't worry, dear boy, now I will enjoy the game'. For the rest of that game, he and his opposing forward attended more to each other than to the play.

In Ireland, although Martial Law was in force, the hospitality was tremendous. It was the custom after a game to take the teams to the University Union for dinner during which we were entertained in an uninhibited Irish exuberance of tall tales and not uniformly tuneful singing. Dinner would finish at midnight after which we were expected to dance with local girls. On one occasion we played Cork University which had a splendid team, including two Irish International forwards, Siggins and Russell, and we were fortunate to beat them 24-16 after a great game.

On arrival I had been met by Sterry O'Herlihy, secretary of their club, who 'adopted' me for the stay. From the dock he drove me past the City Hall to point out the damage caused by the 'Black and Tans' in the original attacks by Britain on the Sinn Fein obviously a festering memory. That night, after being well dined, the late dance held little appeal, so Sterry said to me: 'I know an innkeeper who will furnish drinks even after hours'. I did not realise how risky it was to be out after midnight during a

state of Martial Law. At the inn we were ushered to an upstairs sitting room where Storry ordered drinks from an obviously old friend. To my horror, after telling me that he was a member of Sinn Fein, he took a revolver out of his pocket. He expressed his intention of using it on the British. Hurriedly waving the gun aside, I exploded: 'For God's sake, put the bloody thing away. I don't want to know about it'. Suddenly heavy footsteps sounded downstairs and a white-faced innkeeper rushed into the room: 'Your room is number six and yours is number nine; we're being raided'. I was horrified a second time. I imagined being detained indefinitely for consorting with an armed man as well as drinking after hours! Both Storry and I spent a bleak half-hour. At last the footsteps receded and the innkeeper returned to tell us that all was clear. We beat a rapid and relieved retreat to the University residence.

During university vacations and after the local season I played for Waterloo Rugby Club with and against the cream of British rugby. There were a number of outstanding exponents of the game who tended to dominate the matches in which they played. As well as the impression of their personalities, their persons occasionally made an even more vigorous impact on me.

Forwards meriting mention are Joe Periton of Waterloo, Jamie Clinch of Dublin and the redoubtable George Beamish, captain of Leicester, Ireland, the BaBa's and the Royal Air Force! The encounter with Beamish at a Boxing Day match emphasized my physical limitations. It had been snowing, the surface was soft and muddy and in no time the forwards were practically indistinguishable. A muddy figure came barging his way into our pack. Instead of tackling, I sidled up to him, put my hands next to his and hissed 'Yes'. He gave me the ball and, well pleased with my subterfuge, I turned and made for the Leicester line. Before I had covered ten yards I was seized from behind and shovelled into the snow. I lay bewildered by this turn of events. I was lifted up to find the enormous Beamish wagging a ponderous forefinger, 'Now you stay on your own side of the scrum'. I did. A less sporting giant would not have let me off so smilingly. Beamish went on to become head of RAF Transport Command during World War II and, when we met, had a happy laugh over this and other incidents.

Raymond Bark-Jones and Watkin Thomas, each in turn captain of Welsh rugby, played for Waterloo and both became my friends. Raymond was an undergraduate at Cambridge and when I played in that delightful city, would invite me to stay with him at Clare College. It provided an engaging glimpse of the somewhat monastic traditions of cloistered life still influenced by its mediaeval origins. I listened to the wise advice of 'scouts' who had served generations of students, attended formal breakfasts where discussion was academically directed and was entertained by talks of dare devil entries after curfew. I admired the personal tutor system. The redbrick universities with students from wider backgrounds lacked these disciplines and were freer but missed such advantages of the older universities.

Watkin Thomas was an enormous man with the pleasing, if somewhat frightening appearance of a great bear. In the line-outs he was formidable, as I discovered in my first match for Liverpool University against Waterloo when I was designated to mark him. I realised that standing next to him, I would not be able to catch the ball, but determined to prevent him from catching it. As we both jumped for the ball I hugged his arm. This did not stop Watkin however: he caught the ball with me hanging on to one arm. I was astonished when one week he invited me to the theatre and slightly apprehensive, expecting a night of heavy drinking. To my surprise I discovered he was a schoolmaster in St Helens in Lancashire and a most erudite Shakespearean scholar.

Tuppy Owen Smith had been an undergraduate with me at Cape Town University, and in our early years we had both played for the same second and under-19 teams. Later he won a Rhodes

Scholarship, an Oxford Blue, played rugby for England and cricket for South Africa. We met again at the County Championship finals when Tuppy was playing for Hampshire against Lancashire.

Roger Bushell played for a Cambridge side against us. He was a tall, well built, loose forward who marked the line-out, through which he would charge to collect the ball, as was permissible in those days. This presented a challenge which, as pack leader, I could not ignore. On three successive line-outs I tackled him as he collected the ball on his way through. Understandably, he was displeased and on the third occasion, said in Afrikaans, of all things: 'xxxx, you'd better watch it!', which was my first indication of his origins. In the next lineout I placed myself strategically at his side. To my astonishment he hit poor Fred Hore, who was again paying the penalty for our resemblance. After the game Roger and I found we had many happy associations in common.

Roger Bushell was a real leader of men and became famous for his part in the 'Great Escape' from P.O.W. camp in Germany in 1943. Hitler's order for his execution was a despicable war crime which horrified and distressed us. Years later, after my return to South Africa, I contacted his father, an engaging personality. The son's inheritance was obvious. We exchanged nostalgic recollections.

Of the three quarters in my sight from the close range of a scrum, Heaton and Leyland of Waterloo and England could arouse enthusiasm when they had the ball under their arms and today still bring smiles to my armchair memories.

Fellow Liverpool forward, Joe Edgar, whose family owned ships plying between Portugal and Liverpool, became a close friend. A 'parfait English gentleman', the team dubbed him 'Gentleman Joe'. I enjoyed the hospitality of his family on many a pleasant occasion and especially each New Year's Eve when, after dinner, the ladies would retire, leaving Joe and me to finish a bottle of his father's vintage Madeira. Joe's 'Old Man' had, in his time, been an English International and would give son Joe and me his grandstand tickets for the big games at Twickenham and so we had privileged seats for internationals, including the visit of the South African Springboks and also for the Oxford and Cambridge games.

When the Springboks came over in the early 1930's I was a probable for Lancashire. At the last minute it was decided to field a combined Lancashire-Cheshire side for which I was not chosen. When I saw the bulk of the hefty Springbok forwards, I was quite pleased not to have to prove my valour.

Of all my days of playing rugby, those in Great Britain were most enjoyable. I think often of the men I met, of their warm fellowship and many kindnesses and mourned when a number were killed in World War 11.

Tennis was played competitively for the University and socially at the home of Dr Cunningham, a popular senior physician at the hospital. Every Friday after our game he dined us royally, a welcome change from the hospital mess.

Many delightful friendships were made through the Medical School, rugby and tennis. Rugby boots and a tennis racquet were social assets and, if the part played in our lives by sport is overstressed, it was nevertheless an asset from which we benefited in health and enjoyment. I found the English did not immediately take one to their bosoms, but once they know and have judged, they are fast friends.

Among the most delightful was the Allen family, resident in Liverpool but with a holiday home on the Isle of Man. Eddie had just completed his medical training at St George's Hospital, London; Roy, the younger brother who played rugby with me, was as cheerful a citizen as any, and their sister, Eileen,

was charming. The first weekend I spent with them was an introduction to a salt-of-the-earth English family. Crossing the Irish Sea, as usual I was very sea-sick, but once on dry land it was splendid. We drove across the island from Douglas, the capital, and, to my amazement, passing through a dell on the way to their home in Port Erin, everybody in the car bowed to the right and said: 'Good evening, fairies, good evening, little men'. I was astonished, but, as they waited for me to say the same, although feeling somewhat foolish, I followed suit. After this ritual had been repeated on each crossing I found the custom charming. They believed that the 'wee folk' in that dell were friendly and deserved obeisance. Depending on the hour, we greeted them every time by the same formula. On Sunday mornings their father would take us to the local pub where we were welcomed in hospitable Manx fashion over a beer or two before home and lunch.

The following year Eileen married a friend of Eddie's, also from George's. I was invited to be an usher at the wedding in St Margaret's, Westminster. We all repaired to Moss Bros. to hire morning coats and top hats. It was my first fashionable occasion and the following morning The Times went to town with pictures and prose. My name appeared with that of Lord Horder, the King's physician; I am sure I was more impressed than he was. Roy joined the RAF and was killed during the war, but Eddie, after his military service, was in fashionable practice as a radiologist in Harley Street.

Among the several remarkable individuals whom I met during this period of my life was Derek Mills-Roberts who, as brigadier during the war, took part in several of the raids on the French coast as deputy to Lord Lovat, leader of the Commandos. Another rugby acquaintance, we enjoyed an anecdotal relationship.

A charming young lady was Rose Heilbron, engaged to my friend and tennis partner, Nat Burstein. Rose had a retiring nature but was a fascinating conversationalist. I esteemed and was fond of both of them, but she surprised us all by her rapid rise in the British law hierarchy, becoming a leading judge of appeal indeed, the first woman so elevated and a Dame.

We had some delightful parties, exuberant with hilarious banter, at which the life and soul was the convivial Wiley McKissock, later an eminent neuro-surgeon. I was also invited to house parties elsewhere, some of the happiest taking place in the Lake District, within convenient reach of Liverpool. A South African student in Great Britain in those days was welcome everywhere.

## Chapter III Setting Course

In December 1932 I qualified M.B., Ch.B. having passed the Conjoint examinations for MRCS and LRCP that same year,

In our final year the Medical Faculty did us proud and I was runner-up for the clinical prize, having surprised myself by diagnosing the first case of psittacosis in Liverpool. Without definite plans for the summer holiday and a three month wait before the start of the official housemanships, I was invited by the incumbents to do three week locums for the house physician to the Professor of Medicine, John Hay, and the house surgeon to the Professor of Surgery, Sir Robert Kelly.

Professor Hay was a master of the Sherlock Holmes technique of deduction from meticulous observation. From his examination and scrutiny he would tell the class the patient's occupation, habits, etc. from clues such as coal dust under the fingernails, a mark on the hands, or the type of shoe worn.

During my first ward round as locum to his house physician, he showed us a puzzling case. The woman was ill with a mysterious disorder, undiagnosed even by the Professor himself a real challenge. When I had done my rounds I determinedly returned to the patient. After exhausting the routine of questions, perchance I asked had she ever been in the tropics? She said 'No', but after some thought added 'But I had a budgerigar that died three weeks ago'. I rushed back to my room to look up psittacosis and there it was! On the next ward round I announced this to the Professor and my doubting colleagues and was told to refer to the Professor of Public Health who did the appropriate tests and confirmed my diagnosis, resulting in the closure of a pet shop in Blackpool. At the end of the year, the commendation from Professor Hay included: 'He has exceptional powers of diagnosis'. It was a definite uplift when applying for future jobs!

I spent two further months of that summer at the Mill Road Infirmary in Liverpool a fortunate interlude, for I was literally taken in hand by Balfour Williams, the Senior Surgeon who was tired of operating but loved to teach. The first morning I told him I had an acute appendix for his list. 'No', he said, 'You will operate and I will assist. Of all my 'practical' surgical apprenticeship, his unexpected instruction was the most detailed, thorough, valuable and welcome. He not only told me what to do, but with each manoeuvre, where my fingers should be, what each should feel and what each should do. Operative surgery became thrilling. Until then I had destined myself to be a physician but now I was impatient to operate. I rationalised the change: it was the translation of medicine and diagnosis into action. Medicine had a new and more attractive surgical face which has never lost its appeal.

My official housemanship started at the Royal Infirmary - six months as house surgeon to Mr Wolfenden's firm, followed by a Senior House Surgeoncy at the Birkenhead General Hospital which embodied medicine and gynaecology as well as surgery, with its subdivision of orthopaedics.

It was at this time that my interests inclined towards orthopaedics, covering disorders of the skeleton. The subject was more defined than general surgery and I found, and enjoyed developing a fortunate knack in treating fractures. The very name 'orthopaedics' means a 'straight child with its implication of hope for the maimed, the lame and the deformed.

At the Birkenhead, I worked under J.B. Oldham, the Honorary surgical chief. While holidaying in Egypt, he had brought to his attention a solution called 'Amnii Visnaga', used as an ancient treatment of kidney stones. He was intrigued and brought some back with him, which we started to test on patients. It was fascinating to use this early example of natural medicine. We were certain that no patient was the worse for taking the substance and some may even have improved.

Before finishing at the Birkenhead I applied for and was awarded the Robert Gee Fellowship in Anatomy of the University of Liverpool for 1934 and later, also enjoyed the Ridgeway Research Scholarship of that University. Thus, from the time of qualifying, I was enabled both to continue my training and to develop my research interests.

The holders of the Robert Gee Fellowship were expected to tutor undergraduates in Anatomy. This entailed daily attendance in the dissecting room, which was no disservice as most incumbents were also working for the Primary Examinations for Fellowship of the Royal College of Surgeons. The standards in Anatomy and Physiology were acknowledged as particularly high, with meticulous knowledge required. For the latter, Sampson Wright's classical work on Applied Physiology, in updated edition, was our bible. As the year wore on, I became more and more fascinated by bones and joints, paralleling my clinical inclinations. Other modalities could not rouse equal interest.

I became registrar in orthopaedics to T.P. MacMurray while working for those daunting hurdles of the aspiring surgeon, the Fellowship examinations. Also, since graduation, the order of the day was locums over weekends and during most holidays. This was to earn enough money for fees for the Liverpool University course for Master of Orthopaedics, a splendid preparation for practising orthopaedics and at that time the only course of its kind in the world. It was conducted by Professor MacMurray, the direct successor to, and nominee of Sir Robert Jones.

Sir Robert Jones was himself successor to Hugh Owen Thomas and, with him, was founder of orthopaedics as an independent discipline. Sir Robert died just before the end of 1933. I was fortunate enough to attend his final, crowded lecture in which he discussed the difficulties and possibilities of replacing the knee joint, a procedure now frequently performed, but still plagued by some uncertainty. Years later I designed a knee joint implant. The first one inserted into a patient was successful in all aspects. Unfortunately, I did not follow up this operation and it has since been pre-empted many times, but the early models, the design for which remains applicable, are still with me.

Liverpool had been the first centre in the English-speaking world, and probably in the whole world, to establish orthopaedics as a specialty distinct from general surgery. During our training general surgery was considered the predominant modality, but once we embarked on the Liverpool Masters course in orthopaedics, the emphasis changed.

Before the war there were few specialised orthopaedic centres in Britain but each was led by a chief of dominant personality. Presumably each specialised orthopaedic unit required a man who could contend with the general surgeons who jealously guarded their preserves and resented this upstart discipline breaking into the overall surgical dominance. Among these great chiefs were W. Rowley Bristow of St Thomas' and Sir Thomas Fairbank of King's College in London, Sir Harry Platt of Manchester, Norton Dunn of Birmingham and T.P. MacMurray of Liverpool.

MacMurray, a tall, impressive Ulsterman, was a superb but dogmatic teacher. He believed Robert Jones was the absolute and final authority on orthopaedics and anything he had not taught could not be valid. When newly qualified in Belfast, he decided to move to England to find a future. He landed in Liverpool with an introduction to Sir Robert Jones whose first question was: 'Do you play cricket?' Sir Robert was enthusiastic about his weekly game of cricket which was played near his home. MacMurray was a bowler of some merit and the following week he was on Jones' staff! His career had been initiated under the best circumstances.

He treated his juniors fairly and with kindness but did not allow us to assail his opinions. If we posed a doubting question he would smile benignly: 'Well, laddie, you may be right but we believe that ...' which would silence all further discussion.

Whenever possible I would motor to attend Harry Platt's weekly teaching clinic in Manchester where clinical thought was more liberal, to be greeted by an upraised arm and 'Well, young Helfet, what's new today?'

H.P., as he was known, was the acknowledged national expert on bone tumours and was master of both orthopaedics and music. His early wish was to be a conductor but a tuberculous knee brought him as a boy to the care of Sir Robert Jones in Liverpool. In those days that meant several years of bed rest in hospital, during which he became devoted to Sir Robert, eventually becoming a disciple and later an outstanding leader in the same field. Some years later, while seeing a patient with Rowley Bristow at the London Clinic, a puzzling case led Bristow to instruct me, and incidentally impress the patient: 'I want you to leave straight away for Manchester to show these roentgenograms and slides to Harry for his opinion'. His secretary 'phoned H.P. and I was on the next train to Manchester. H.P.'s verdict on the case was received as the Gospel. Professor of Orthopaedics at Manchester University, President of the Royal College of Surgeons the first orthopaedic surgeon so honoured and President of the British and International Orthopaedic Associations, I was happy to initiate an invitation to Sir Harry to observe the first examinations for the Fellowship of the South African College of Physicians and Surgeons and, as a Member of Council of the College, to read the citation for the award of an Honorary Fellowship in 1957.

Towards the end of 1935 a tremendous stroke of good fortune came my way. Once a week during the summer, I would meet with some members of the Waterloo Rugby Club at a pub before returning to my studies. On one occasion they were all planning their summer holidays: one was to drive his Lagonda in the John O'Groats to Lands End Rally, another was sailing his yacht to the Shetland Islands, a third would sail his round the British Isles. Having no plans and lacking funds I sat there feeling out of it and so, on the spur of the moment said: 'I would like to do a trip as a ship's doctor'. One of them asked if I had told George Key, secretary of the Club and an intimate friend of Mr Lister, managing director of the Cunard-White Star Line which had its headquarters in Liverpool. I said 'No' and thought nothing more about it. Lister was a senior member of the Club and would regularly join the players in the club house after a match. I would feel particularly flattered when the distinguished Mr Lister would pat me on the shoulder: 'Well played, Helfet. Have a beer.' and a little later: "This week I went to see Professor Hay about my ticker, and he says such and such. What do you think? as if the opinion of the newly qualified doctor was of any moment. But I discovered afterwards that for some obscure reason it did weigh with many folk; medicine must have an aura! In any event, it resulted in the greatest good luck for me.

The following Tuesday George Key 'phoned to tell me he had played bridge with Lister and had asked him about me. Lister had followed this up and had spoken to Gwyn Maitland, medical director of Cunard, renowned as the first organiser of medical services for civilian shipping lines, who sent a message that I should see him. I duly went to the Cunard offices where Maitland, a distinguished figure and charming, took me somewhat aback when, without ado, he told me he had a vacancy and would I 'take' the S.S. Antonia sailing in two weeks' time to Montreal. This conjured up Helfet steering a massive liner across the Atlantic seas. I blurted my thanks but, thinking of my erratic golf, felt constrained to add but I must tell you, I tend to slice'. This seemed to engender an easier atmosphere. He invited me to sit down, ordered tea and proceeded to advise me. He allowed me a helpful concession: I would need the day uniform of 'Blues', but, as it was only for three weeks, I could do without mess kit. All this stemming from an idle remark on my part!

We sailed from Liverpool on a pleasant day in August and, apart from the first two days when I had my usual initial bouts of seasickness, I enjoyed every minute. The voyage as a ship's surgeon was a novel experience. Among the passengers was the Gray family, the father a Canadian legal luminary

travelling with his wife and two children, both near my age. They and a group of young engineers from Cambridge University enjoying a vacation stint as apprentices in the engine room, became pleasant companions.

At the end of the voyage the ship was to revictual for five or six days in Montreal. The Grays invited me to spend this time as their guest in Toronto. Cunard allowed their regular officers, after a year's service, a train journey anywhere in Canada at their expense. When I mentioned the Gray's invitation to the captain, he offered me this benefit, although it was my first voyage a very generous gesture; apparently Mr Gray had fame and prestige for I am sure I had done nothing to deserve it.

So off I went by Pullman to Toronto: the reputation for comfort and service on the great continental mail trains was well merited. On the first day the Grays took me to the Toronto General Hospital to meet their close friend F.G. Banting of the famous team of Banting and Best who had discovered insulin. To talk with him and to be shown his laboratories was a rare experience. The stay in Toronto was all too short.

On returning to the ship in Montreal I was met by my Cambridge engineering friends. An evening, made cheerful by a meal at an excellent hostelry was a jovial occasion. We were all in good spirits, liquid and otherwise, when, on the way back, we passed a nightclub, outside which stood an enormous doorman. This caused much banter to which, impressed by his size, we joked on the menace he would present as a bouncer. For some reason, when we got back to the ship, my nose started to bleed. Not imagining that anyone would take seriously so tall a tale, when asked what happened to me, I said: 'Well, you know the man outside the club—he attacked us. He bloodied my nose, but in the fight I knocked him out.' Picture my astonishment when I found, over the next few days, that the crew had swallowed this line and had developed awesome respect for my prowess. It took some time to disillusion them. I was told afterwards that some of their number had seen me play rugby and really believed this massive feat of arms was within my powers.

I went to thank Gwyn Maitland for the splendid cruise. He greeted me warmly and mentioned Cunard were pleased with my performance and would be happy for me to do a similar voyage the following year. I asked if any Cunard ships called at Cape Town, as I had not seen my family for a long time, but apparently no routine voyages were scheduled. So I was bowled over when, a few weeks later, Maitland summoned me: the prestigious luxury liner, the S.S. Franconia was leaving on a round-the-world cruise at the end of the year with Cape Town on its itinerary. He had not yet appointed the junior medical officer. He had two applications for the post but, if I wished, I could occupy the berth. I had till the following Tuesday to decide. I hesitated; to go off for nearly half a year at that stage of my career might affect it seriously. However, on the way out, I picked up the beautifully illustrated brochures of the cruise. I returned to my digs and all I could think of was this wonderful opportunity, probably of a lifetime. By the weekend I realised that, if I did not take it, I would not be fit to write the examinations anyhow. So, on the Tuesday, with Maitland's blessing, I accepted. I settled with renewed zest to preparing for my examinations.

Both Joe Edgar and I felt the need for a break before the final papers. We opted for the Norfolk Broads where we hired a small sailing craft equipped with a primus and other necessities for a fortnight on the water.

Neither of us had sailed before. From a sailing manual I read Joe the instructions for casting off, hoisting the sail and steering. Of course, we made all possible mistakes including falling into the water and running aground on the bank. The first time this happened I grabbed the punt pole to push the dinghy off. The pole stuck in the bank, I was left attached to the pole, while the dinghy

drifted from under me into the channel - an odd sensation. Joe, still aboard, was in such paroxysms of laughter that he did not realise his drift onto the opposite bank. From my vantage point in the water I watched this, but held my peace and had my share of mirth when, being without the pole, he also had to clamber into the water to haul the wayward boat off that bank.

At that time of the year the nights on the broads were heavy with midges and mosquitoes. The swarms seemed to line up into RAF formations and make for the unfortunate Joe. They avoided me - perhaps biting me was not to their taste so each morning I condoled with him.

We lazed and swam and, in the evenings, would tie up at a pub where we revictualled. It was a perfect holiday and we left for London much refreshed.

In 1943 Joe was wounded in the battle of Tobruk and transferred to a hospital ship. Despite having a big red cross on its side and all lights ablaze, it was sunk on its way to Cairo by a German submarine, with considerable loss of life, including Gentle Joe.

The Primary Fellowship Examination of the Royal College of Surgeons embraced two days of written papers and a searching forty minutes of orals. Each part was conducted at Queen's Square in London. My first examiner was Gwyn Williams who had a fierce reputation, but I sparred successfully with him. Gordon Gordon-Taylor, much more amiable, followed. He had listened to the first match, smiled at me and said: 'Come along with me young fellow and I'll see if I can catch you out—an absolute encouragement—and all went well.

Still elated at my results, I travelled to Southampton, my mind's eye absorbed in the language and pictures of the travel brochures. A visit to India, Bali, China, Japan and, of course, Cape Town in my wildest dreams I had not imagined that all this would become reality.

## Chapter IV A Seafaring Interlude

The Franconia was a beautiful ship of 20,000 tonnes. The captain in welcoming me assured me of a good time. As junior doctor I would be responsible for the medical care of the crew. I was to accompany him on his early morning rounds. When requested, I would treat passengers and should be allowed a certain amount of the fees collected by the senior doctor, over and above my salary of £20 a month.

This gentleman turned out to be middle-aged with smooth social manners with which he cloaked some of his clinical shortcomings. I discovered later that this trip as senior doctor on a world cruise was the culmination of a career of alternating locums in general practice and voyages as a ship's doctor. I was full of enthusiasm and much too naive to realise when I was being exploited professionally and financially, but enjoyed myself from the very beginning. Except for the first two days of awful storm, which produced the rhyme:

The ship began to turn  
and pitch and roll and squirm  
And there was nothing could defer  
Helfet from his mal-de-mer'.

From the third day, although the weather had not yet abated, I went on the captain's round and was astonished when we reached the prow. The sea was so rough that with each wave we rose or fell fifty to sixty feet with the sensation of being in an uncontrolled elevator.

The voyage to New York was on the regular schedule and lasted five or six days, but once in harbour the ship was prepared for the tropics, painted all white and converted into a one-class ship.

On the 7th January 1936 we sailed on a five and a half months' cruise a splendid adventure. Every young man's dream was to travel the world in happy company and absolute luxury. I would preside over a table of selected, or selecting passengers, but was also expected to entertain passengers generally and so was allocated a double cabin overlooking the top deck promenade, which was cool and breezy in the tropics. I could sign for a supply of drinks and cigarettes to entertain passengers. My steward was a small, charming Irishman, O'Shea by name, but soon popularly dubbed 'O'Shaggity', who cared for me admirably. It seemed that I would live in a manner to which I would be happy to become accustomed. Indeed, the six months was to be an opportunity to learn and experience the priorities I would wish to govern my way of living—and so it did.

The ship carried 240 passengers, mainly American, many with imposing achievements, among them founders of great industries, also French and Dutch, complemented later when we reached Cape Town by forty South Africans. Some had inherited wealth with grace, others made wealth gracefully and a few carried their wealth with arrogance, but in the closed society of the ship soon learnt the advantages of more pleasing relationships.

Some of the older men, veterans of the Great War, were pessimistic about the future, disillusioned by the politicians who had proclaimed it the 'War to end all wars'. Knowing the nature of man, they felt history was a succession of catastrophes and, having survived one war, it was only a matter of time before we were immersed in another. But everyone else, especially the young, confident of their future, indulged fully in the pleasures of the present.

Two men were exceptional: Count Willem van Limburg Stirum, an aristocratic and diplomatic Hollander, was a captivating and most interesting character. His companionship had grace and merit. In later years I learnt with sorrow that his unrelenting disdain for the Nazis in Holland during the war led to his execution.

The other, exceptionally interesting and erudite was C.S. Batchelder, the official ship's lecturer. Tall and spare, in his middle or late sixties, he had primed himself to discuss and report on each country and town that we would visit on the cruise. He had been in the American diplomatic service with the rank of ambassador, chiefly in the Far East. He practised yoga, which he gave as one explanation of his physical fitness. Another was that every day, after lunch, in his cabin he would strip and relax and meditate. In the heat of a tropical Madagascar morning he outwalked me, then in my late twenties. He was most knowledgeable in the cultures of the East and I spent hours sitting at his feet.

There were some 30 young people on board which made the voyage unexpectedly pleasant. I discovered too that a ship's doctor was everybody's friend of the crew, the officers and of the passengers, young and old.

Tom Cullen was an urbane and charming, well-informed and very helpful purser. Every Saturday before lunch, his comfortable cabin became the 'Clachan', the appellation often given to a pub in the Highlands of Scotland, to which it became a privilege to be invited for drinks and amiable, amusing talk. Fortunately he elected me a habitue for these most enjoyable occasions. Each week one or two special visitors were expected to interest and amuse the company and, with the contributions of the regulars, amusing and interesting they really were. To keep in the swing, I honed my rugby, medical and other stories. Solemnity had no place in the 'Clachan'.

One passenger, a gloomy man reluctant to enter into converse with others, was reputedly one of the richest men in the United States and head of an enormous firm of international fame. He and his wife were travelling with two daughters in their late teens, valet and personal maid. They occupied the two main suites on the ship. One evening, thirty of us, the 'young ones' on board, were invited to the elder daughter's seventeenth birthday party, a pleasant cheerful affair. Later, at three o'clock in the morning when the party was well over, a steward knocked on my door. 'Mr Du Pont's compliments, and would you please come and see his daughter who is not well'. Outside the cabin I found an unhappy father pacing up and down. 'My daughter' he said, 'has appendicitis. Will you take it out? I replied that if necessary I would indeed do so, but would like to examine her first. On examination I found her trouble was that she had partied a little too well: her tummy was rather distended. I prescribed a medicine and said, if she was not more comfortable in two hours, I would operate. In the dispensary we prepared the carminative which was administered before I returned to bed. Next morning, when I enquired after her condition, her father said that she was comfortably asleep. Later I examined her again and found all normal. I told her father she was well and was unlikely to have any further problems. He looked at me sadly. 'Well, back home I had exactly the same symptoms and they took my appendix out'. Even my naïveté could conceive that the appendix of one of the world's richest men might be an attraction.

Having been converted into a cruise liner, the Franconia sailed from New York for Trinidad. Within days we had exchanged the cold and snow of New York's winter for the warmth and smooth seas of the Caribbean. While anchored in Port-O-Spain, capital of Trinidad, we were taken on a drive for our first sight of coconut plantations and a spectacular tropical botanic garden.

Many of the passengers busied themselves shopping for rum and angostura bitters, local products. The next morning a hot, sweaty game of squash was the satisfactory basis of a goodly thirst at a

lunch-time rum party. We were served long rum cocktails in tall iced glasses, very welcome after our exertions. The recipe was given as 'one of sour, two of sweet, three of strong and four of weak', the 'one of sour' being lime juice, 'two' was syrup, 'three' was the rum and four' crushed ice. After my strenuous game I relished two of these without realising the potency of a three-eighths content of rum, with the result that I was soon soundly asleep through to the next morning.

Trinidad was followed by Bahia, an interesting Spanish-style city in Brazil and its first port. It had a lift to take visitors from sea level to the town and I was puzzled that the locals all stood a respectful distance from me but not from the other passengers. I was wearing a bright blue university blazer with a noticeable badge and was told afterwards that everyone thought I was the 'admiral' from the ship.

Rio is a beautiful city, with mountains surrounded by shimmering sea and dominated by the Sugar Loaf, on top of which is the imposing statue of the Christ of the Andes, reached in a basket cable car. The view from the top is comparable only to the Cape Peninsula from the top of Table Mountain. The two days we stayed in Rio gave time for a bathe on the fabulous Copacabana Beach, and also to visit the local market where I purchased gifts for my family in Cape Town.

'Crossing the Line' with 'Father Neptune' amusing the passengers was a well-practised ceremony. Costumed judges prescribed penalties for the 'guilty', the main being a dipping in the pool. Everyone enjoyed the elaborate fun, but none more than the 'Old Sea-Dogs', the senior officers most of whom were nostalgically sentimental as they reminisced of their cadet days on the old sailing ships. Practically all of them ordered pork and beans for the 'Neptune' lunch, a staple on the sailing ships, in preference to the more delectable new-fangled dishes on the menu. All had favourite anecdotes to relate. The captain told me that, there being no doctor on board, each sick-bay in those days would carry the 'Shipmaster's Guide to Medicine' which listed the symptoms of possible illnesses and numbered the mixtures which should be administered in each case. On one occasion a crewman became ill. The symptoms required mixture No. 15. However, that bottle was empty, so the captain, ever-resourceful, said: 'It doesn't matter, we'll mix No. 7 and No. 8' which was subsequently taken by the sick man! We were assured that the treatment was successful and the patient cured without any complications.

On the way across the sunny South Atlantic we spent half a day on St Helena, the island of the six years of Napoleon's final captivity. I had long admired Napoleon for his military genius and the positive aspects of his Code Napoleon. His history had been favourite reading. The visit to the house 'Longwood' reinforced my perception of his great stature as soldier and lawgiver and, from the size of his bed, increased appreciation for the smallness of his physical stature, the same as my father's. To this day there is speculation as to Napoleon's death—whether by arsenical poisoning or from stomach cancer or another cause. Certainly his treatment by Sir Hudson Lowe, Governor of the island, was shameful, but he bore himself with dignity.

We berthed early one sunny morning in Cape Town where my parents were waiting on the quay. Although older than I remembered, it was great to see them and the rest of the family. Most passengers left by train for Rhodesia, the Victoria Falls, the game reserves and Natal, to rejoin us ten days later in Durban. This left us a week to spend in Cape Town, which, as the home of my youth, was naturally a highlight of the journey.

The chief steward and the leader of the orchestra most kindly volunteered to stay one evening to provide me with a private dinner dance on board. I invited family and old friends, in all twelve couples. My brother brought a charming girl, a friend of the family's, Nathalie Freeman. Little did I

realise that we would meet again later that year in London; that we would subsequently marry and become the patriarch and matriarch of three sons, a daughter, and at time of writing, four delightful grandchildren.

But meanwhile I enjoyed my Cape Town stay enormously, once more relishing bathes on the incomparable Muizenberg beach, climbs on the mountain and fun and laughter as of old.

Diego Suarez in Madagascar was the first stop after South Africa, notable for me because of my long walk with Batchelder which determined me to see as much as I could of him on the long voyage and garner the fruit of his experiences and erudition. Madagascar, lying across the sea routes from South Africa to the Middle and Far East was to become strategically important in World War II and in due course was taken over from the Vichy French.

After Madagascar we stopped at the Seychelles which many of the passengers and crew thought should be considered the original Garden of Eden: an equitable climate, luscious fruit in abundance and delectable fish which the locals claimed were so plentiful that they could be caught simply by putting a hand into the water. Although full use was made of the beautiful beaches and bathing, none of us tried this approach to fishing. A special wonder was the 'Coco-de-Mer', the enormous double coconut or 'forbidden fruit. However, when we went into conditions more deeply we heard that V.D. was endemic. But the local European residents did not hanker for change—they enjoyed an ideal retirement.

And then Bombay, an extraordinary city. Having to remain with the ship while most passengers toured to Delhi, the Taj Mahal and Kashmir, local exploration provided intriguing compensation. The glories of the British Raj, much in evidence, contrasted with the squalor and poverty of the Indian masses, with another contrast in glimpses of the splendours of the Indian princes.

In one square we were horrified to see whole families literally living on the street, eating, sleeping and discharging all their functions in this crowded area. We were told that in the nineteenth century the population of India was comparatively stable at fifty million, kept that way by the ravages of malaria and the intestinal diseases. However, with the introduction of the British Administration, malarial control and public hygiene, the population increased dramatically. What that square and environment look like now, with the population of India approaching two billion, Heaven only knows. In the wealthier areas, the old city was attractive and even sumptuous.

The Taj Mahal Hotel, over a century old, was one of the most splendid anywhere—an architectural delight with large, high-ceilinged rooms. We were welcomed and made free of the amenities and clubs of the Raj. Those officials I met seemed to live up to their image of Colonial Service integrity and sounded their determination to be fair to the local population and have their interests at heart. Their efforts were handicapped by the poverty, the tyranny of numbers and the obstructions presented by the Caste System with its apparent disdain for the value of human life. I was presented with a striking instance when, during a round of golf at the Willenden Club, in pleasant green environs, we came across two Indian families—mothers and numerous children—encamped in the middle of a broad fairway, eating a midday meal. We each had two caddies, one to go ahead and the other to carry the rented bag of clubs. Conscious of my not always accurate drives, I asked my caddie to warn the women and children to move off the fairway. He looked at me in astonishment and said: 'You play, no matter'. I repeated my request and he again replied: No matter, you play'. Needless to say I was horrified and did not play. In striking contrast the educated Westernised Indians admired and seemed to wish to imitate the British way of life and style of living.

The next stop was two days in Ceylon, made unforgettable by the haunting sight of Colombo harbour in a placid sea and sky crimsoned by the setting sun—a memory which has never been eclipsed.

By now experiencing such joyful days, time seemed in haste. We were enamoured of Penang, a British island colony. Despite the serene and lush tropical setting of leaping cascades and exotic orchids, the colonists clung to their English ethos and even the beautiful hotel, the 'Runnymede', name and all evoked nostalgia for 'Home'.

While anchored at Penang a prankster aboard offered me a salad, liberally spiced with chilli, which I had never before tasted. The fire in my mouth, throat, nose and watering eyes took a long time to subside!

From Penang to Bangkok we took a train along the Malay Peninsula for a comfortable two day journey, scenically pleasant with intriguing glimpses of an attractive people and way of life.

Keenly anticipating glamorous Bangkok, the 'Venice of the East', we were still to be amazed by its crowded floating markets of people living on boats and sampans crushed prow to stern. On land tall, intricately wrought temples sparkled as they reflected the sunlight from innumerable fragments of coloured glass and crystal embedded in their walls.

There was a freshness about South East Asia and, looking back it is sad to realise the lamentable changes in countries then at peace. In after years I appreciated my fortune in having seen and experienced these romantic places before war, Westernisation and the mass commercialisation of the post war age changed their ambience forever.

Each had a beauty and, to Western eyes, the people an elegance and an innocent charm, possibly superficial. As we travelled we began to appreciate that the West had probably been over-smug in evaluating its own achievements, except perhaps in science and military prowess, although even the bubble of the latter has been rather painfully pricked by the Japanese and the Vietnamese.

However, my delight in what we were shown and told at the time was undiluted, culminating in the glories, the sculptural and architectural wonders of Angkor Wat in Cambodia which, according to Batchelder 'must rank with the Parthenon and the finest buildings of the Renaissance as a major achievement in the cultural history of the human race'.

Our first sight of the magnificent temples made an impact more fascinating than did my first view, years later, of the pyramids in Egypt. The main gates were approached by a long causeway flanked on each side by a series of imposing formalised statues. To give an idea of their size, I photographed one with my sun helmet perched but lost on its head. Later I felt somewhat ashamed my frivolous act seemed disrespectful of the majesty and holiness of Angkor.

The temple complex comprising a series of courtyards was surrounded by a walled moat, the whole a stupendous rectangle of approximately 487 acres. Every enormous block of stone in that complex was carved or covered in bas-relief. It overwhelms even my memories. During our stay, I wandered over and through more of it and soon could understand the religious awe of the priests in their saffron robes who moved about the complex in slow, placid dignity.

Fortunately for us, instead of being accommodated with the passengers in the modern hotel, the cruise personnel were lodged in a small French hostelry. The proprietors, thinking of future tours, were out to impress. We had every comfort and superb French cuisine and vintage wines beautifully served for every meal, necessitating a typically French after lunch rest each afternoon.

One evening we were treated to a spectacular display on the causeway in front of the temple by the famed Cambodian dancing girls. Despite the pleasurable anticipation of the rest of our itinerary, I left Angkor with some reluctance.

The next but rather fleeting visions were of the Dutch East Indies, the most captivating pause being at the beautiful island of Bali where two days were not long enough to blemish the appearance of elegance and innocence of the inhabitants. Constant wide smiles allayed fears that we were the innocents. Sinuous dancers clad in elaborate costumes and headdresses swayed their bodies gracefully and expressively, their feet hardly involved in the pattern of movement.

Gabled roofs in Java echoed the attractive Dutch colonial architecture of a like period of settlement, familiar from my childhood in the Cape.

In Manila Bay we had our first sightings of the might of the American Navy. Interestingly enough, as we passed the line of battleships and other vessels of war, a passenger, Mr Russell, standing next to me on deck, surprised me by citing the manufacturer and indicating the special features of each great ironside. Matters clarified as he added: 'We built that one, we did the superstructure on this one, that hull is ours' and so on.

We passed the island of Corregidor, a name which would become well-known for its heroic defence by the American garrison, first under Douglas MacArthur and then the desperate surrender by General Wainwright. We felt the American presence more keenly as we came across service clubs the Elks and the Army and Navy Clubs.

Batchelder and those few passengers who had been in China before were vocal in their admiration. Chinese civilisation, while not the oldest in the world, is the most continuous and their written characters have been in use for over two thousand years. Confucius, born in 551 BCE, initiated the admirable Chinese moral code. For centuries the Chinese had regarded their country as the centre of the world, with human civilisation at its best and that beyond the imperial frontiers lived only barbarians. Batchelder reinforced this belief, adding that when Europe was experiencing the Dark Ages, the advanced state of Chinese culture, science, politics, literature and arts justified their view. Historically, China had been invaded a number of times but the invaders, impressed by the culture and customs of the Chinese, adopted them for themselves. In other words, the Chinese absorbed the invaders.

Despite the size of China, the overriding impression was the bustling mass of people. There were crowds everywhere we went, but always very orderly.

In Hong Kong, we spent three enjoyable days in the very British colony. A charming English doctor took me on the scenic drives round the mountainous island.

Tailors in Hong Kong were well known for their accurate and incredibly speedy work, the quality of the materials they used and their low prices. While there I was measured for a silk dressing gown, pyjamas and shirts, to be delivered when we arrived in Yokohama in Japan. I also acquired a black Chinese ceremonial robe with discreet embossed dragons in gold decorative quilting, which is still with me.

One day we travelled to Canton, a venture into the Republic of China. Although we approached it from Hong Kong by crowded train, its main communications are by sea, one of the oldest ports visited by Europeans. It has its own dialect and, of course, its own style of cuisine, of which Cantonese lobster was an example we relished.

And so on to Shanghai where, on arrival, we were struck by a Municipal Police notice warning ladies against carrying their handbags in a careless manner when walking in the streets or travelling in rickshaws. They were also advised to keep to the main streets and not wander about in side alleys and to note the number of any rickshaw they might engage. The more things change, the more they are the same: I saw a similar notice in Atlanta, Georgia just a few years ago.

Unfortunately I had to stay with the ship and could not join the group going by train to Peking, or as it was called, Peiping. But in Shanghai the exceptional fertility of the Yangtze estuary, which is apparently known from time immemorial as the 'Garden of China' beguiled us.

At the time of our visit most of the foreign community, especially the diplomats and the business houses were segregated in an international concession called the 'International Bund', different and apart from the native city where the cathedral, the Lung Wha Pagoda among other Chinese temples and the 'Willow Pattern Tea House' were situated.

Many are the superstitions in China and the East generally. They may be derided by sceptical 'foreign devils' but some are quite charming when explained. Surrounded by water, the Willow Pattern Tea House was approached by wooden walkway bridges built in a series of right angles. If beset, one can shake off an evil spirit by walking rapidly and suddenly side-stepping to right or left, while the evil spirit unsuspectingly continues straight on and falls into the water. We had fun getting rid of our evil spirits!

We were advised by the cognoscenti on board that Shanghai was the place for a visit to an opium den and even to essay a pipe. We walked into a largish room inhabited by a number of middle-aged and elderly Chinese in various stages of dishevelled abandonment. We had expected euphorically elated faces, but these were sweating and bleak—of euphoria or even satisfied calm there were no signs. Instead of trying a pipe, we beat a sedate retreat.

A Chinese theatre was an interesting experience: we could not follow the language but the story was simple to understand from the miming and gestures. I had not realised that a Chinese play is realistic in the time it takes and that what happens on the stage takes as long as it would in real life. We watched a domestic drama, but could not wait long enough to follow the full story.

One evening we were taken to watch an exhibition of the game Jai-alai, also known as Pelota, the fastest of indoor games. It is played in a three-walled court, the fourth side screened by wire netting to protect the spectators from the hard rubber ball. The players were professionals—expert and enjoyable to watch. I am told it is popular in the Basque country of Spain, South America and parts of the United States.

The teaching in Liverpool had conditioned us to distrust the vagaries of unorthodox or fringe medicine. From earliest days, nature medicine has been the basis of all health systems, most of which started from the realisation that some drug or treatment relieved symptoms or even cured a condition. In the beginning natural treatments were confused by witchcraft and superstitions and because many individuals promoted their own variations. Guided in our learning by Henry Cohen, McMurray and Kelly, we accepted the doctrines of Thomas Sydenham, the 'Father of British Medicine'. I had never disputed the validity of our basic concepts but had to sort out in my mind and with colleagues the confusion between the logic of the microscope and test-tube and the "mish-

mash of legend, magic and empirically acquired ideas and practices"<sup>1</sup> in the claims of the practitioners of the like of Homeopathy, Osteopathy and doctrinal Psychotherapy.

In Lancashire, 'Abram's Box' based on 'Radionics' and claiming to diagnose everything from disease to religion had many adherents which we, following our teachers, held up to ridicule and, in this, as time proved," were correct.

Sir John Weir, pre-eminent in Homeopathy, was invited to lecture to us. To his rather unsophisticated audience he was an imposing, well-nourished figure. He spoke with conviction, so we had cause to consider his theories and results as of some merit. He had acquired a certain renown a physician to the King and other members of the Royal Family, but was later somewhat discredited when the King suffered his terminal illness and it was found Weir had missed diagnosing a malignant tumour in the chest.

In Shanghai, I was put in touch with a Chinese doctor who demonstrated his technique in acupuncture with immediate results, some of which, though seemingly inexplicable, were quite impressive. One visit with no possibility of following up results or complications, however, could not be conclusive. It was my introduction to five thousand year old theories and treatments which had survived the tests of time. Thinking philosophic Eastern people would not have accepted and continued practise these techniques unquestioningly unless they held some substance. It took time, admittedly influenced by Batchelder, before I allowed a doubt or two to nibble at my entrenched beliefs.

Some time after returning from the cruise, I met a number of outstanding Chinese doctors with fascinating theories and practices in alternative medicine. A fortunate meeting with Dr Yong Chai Siow, a leading London acupuncturist, enabled me to observe his diagnosis and treatment of patients.

Dr Yong is a remarkable man with a modest, self-effacing manner, but of outstanding clinical reputation. Of Chinese parentage, he qualified with an excellent degree at the Medical School in Canton and was then apprenticed to his professorial uncle in Peking and father in Singapore to master the techniques of acupuncture. He moved to London and, when I met him, devoted patients in his extensive practice consulted him in both Harley Street and at his home in the suburb of Wembley. I spent several productive sessions with him including a two day visit to his equally busy practice in Amsterdam.

Acupuncture treatment consists of placing needles into nerve centres which have been empirically discovered and have to be learnt by students. There is no doubt that in many instances pain is relieved. Dr Yong believes that about 25% of the cases that responded to his treatment did so because of placebo effect. Also there are limitations to the effectiveness of the treatment, but undoubtedly the theory of energy channels or meridians in the body through which the life force functions has merit. This theory contrasts and is separate, although similar, to the orthodox demonstration of nerve channels.

From Shanghai we crossed the Yellow Sea where the strong colouration comes from the tons of silt washed into the ocean by the Yellow River, China's second largest waterway. From Chin Wang Tao an overland trip took us to the celebrated Great Wall of China. Built in the third century to keep out the Northern Barbarians, the Wall, with an average height of over twenty feet and a thirteen foot wide roadway along the top, extends for 1500 miles over mountain, valley and river. We stood there

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<sup>1</sup> Henry Sigerist quoted in 'Fringe Medicine', by Brian Inglis (Faber)

incredulous because, in spite of a vista of miles of Wall undulating over the hills and valleys, it was difficult to appreciate the antiquity, distance and human accomplishment.

The three day crossing of the China Sea between Chin Wang Tao and Miyajima was a time to digest the amazing sights and cultures we had been privileged to observe. 'Confucius, he say...' became the standard introduction to a variety of attempts at American wit. For the Far East this was a period of political uncertainty. Batchelder attempted an analysis of events in a diplomatic lecture entitled 'Must Japan expand in Asia', but without bringing clarity to the escalating rumbles between an aggressive Japan and an unprepared China.

The port officials in Yokohama had an unpleasantly overbearing attitude, a preview of later arrogant behaviour fed by Japanese military successes. Before they signed the medical and other clearances for the ship, they blatantly demanded for themselves several products, and in fair quantity. To allow the passengers to land, we had no choice but to comply. In contrast, most other Japanese we met were polite, humble in their demeanour and helpful to us. Their obvious adoration of children made a keen impression. However, the men seemed most ungallant to their womenfolk who were expected to wait on them and their guests as if they were lords of creation.

Japan captivates by its beautiful scenery. Miyajima and the Inland Sea were striking examples. The calm, shining blue waters with the Torii shrine two carved, vertical columns with a decorative crosspiece— serene in its simplicity and seeming to float on the water, remains etched in my memory. The especial beauties of Kyoto and Nikko were highlights of our whole cruise. Kyoto was the old capital of Japan where the Emperor and his court studied the 'cities of the poets'.

Nikko, ensconced on its mountain, and embraced by beautiful forests of cryptomeria, had been the estate of an early prince. It was then customary for the great landowners to build elaborate commemorative shrines. This prince felt he could not afford an appropriate monument, so substituted these forests, thereby unwittingly creating the greatest of them all. Also among the artistic temples of Nikko was the shrine of the Three Wise Monkeys hear no evil, see no evil and speak no evil. Elegant pagodas were a prominent feature, with statues of Buddha in profusion. As frequent were ornamental lakes and carved, painted, curved wooden bridges.

In Nikko we stayed at a traditional Japanese inn. As in the few Japanese homes we were fortunate to visit, it was built with a frame of highly polished wood pillars and paper walls which filtered the light of day into softness. The rooms were small but their dimensions could be altered by sliding the walls apart. This also made changing views of the charming colourful gardens possible. There were no chairs, but a black lacquer table, barely nine inches high stood in the centre of the room. Plaited mats of yellow straw served as carpets, with flat, square cushions acting as seats. With the Japanese love of flowers and sense of elegance, one might find, as sole decoration, a tall, slender vase with one rose or carnation. Because of the paper walls, privacy in the inn was limited. I was given to understand that there was a communal bath where daily gossip was exchanged but, most regretfully, we were unable to share in this communal enterprise.

Hot green tea was served in the room. We tasted too, rice wine for the first time, which, served warm, tastes a little like sherry. It also goes well with Chinese food. Formal meals in Japan had a special quality, with the waitress sitting on her knees beside us to ensure we were never without food or tea and intelligent conversation or traditional song. The food was mouth-watering with as much attention paid to its appearance as to its taste. Served on two trays of natural grained wood, it presented the self-conscious beauty of a still-life by an old master. Glowing bowls and dishes were of crimson or bronze lacquer, or of exquisite blue and white porcelain.

In Nikko we experienced such a meal for the first time. We were shown how to use chopsticks. The meal itself started with an hors d'oeuvre of savoury rice and seaweed, followed by a hot fish soup served together with sliced raw fish. The main course was crayfish, ready opened and sliced. The series of dishes, a minor banquet, ended with a bowl of rice and green tea.

After such a repast, the custom was a hot relaxing bath, which we, impatient Westerners and accustomed at our age to being active and energetic, declined. Even so, the tranquil atmosphere in Nikko was an entrancing experience.

While in Nikko one of the passengers took ill. No English-speaking pharmacists were available. An English-Japanese dictionary guided the daunting task of translating the basic formula for each mixture I prescribed. Fortunately, knowing the generic terms for the ingredients made this possible.

There were occasions in China and Japan when I wished I was wealthy! We saw exquisite copies of coloured woodcuts by the great masters of Japanese landscape and, although my funds were limited, I did acquire a delicate set of painted eggshell china cups and saucers and a number of prints. These were by Hiroshige who illustrated the stages of the 'Journey along the Tokaido'—the great Post Road of Japanese history, along which the Samurai legions marched and counter-marched—a colourful, romantic and vital highway. Laurens van der Post later described the full series of fifty-three works as 'elegiac, gentle, more accepting; and charged to the full with the mystery of all things from the pebbles at the ford to the clouds menacing Fuji itself with blue slanted rain'.

Mount Fujiyama, or 'Lord Fuji is an omnipresence, as is Table Mountain in Cape Town, or the Sugar Loaf in Rio. It is often covered by cloud but, if fortunate, one may have breathtaking views of the perfect cone, sometimes with cloud wreathing only the top. Seeing it in its snow-clad serenity, it is hard to visualise the furies of its periodic eruptions.

Built to replace an earthquake-ravaged city, Tokyo had a solid, modern appearance with handsome Western-style buildings and the well-lit main street, the Ginza, bustling with busy crowds.

We stayed in the attractive new Imperial Hotel, designed by architect Frank Lloyd Wright. Naturally, we could only drive past the Imperial Palace; no-one was allowed to enter, but everyone, as they passed by, bowed to pay reverence to the Emperor within.

We had on board as a passenger Percy Marmont, a luminary of the London stage. He had been invited to visit the home and take part in a tea ceremony with a leading Japanese actor-manager. Percy asked me to join him. We entered only the sitting room and dining room of what, in London, would be a simple but comfortable house. There was some European furniture so we were not expected to sit on the floor. On arrival we were introduced to our host's wife and daughters, all attired in the traditional kimonos with big bows at the back. There was much smiling and bowing. The ladies were quiet and respectful and I was surprised when the father looked annoyed at my waiting for his wife to enter ahead of me and holding a chair for her to sit down. It was so obviously a male oriented society.

The Japanese teahouse is a unique institution with an atmosphere of its own connected with the tea ceremony which I once heard described as 'the mythical principles of Zen Buddhism interpreted in the light of social convention'. A few of us, all young men, had been given the address of one of the more reputable teahouses, situated in the area called the 'Yoshiwara'. As we entered the teahouse with its picturesque pointed thatched roof, a man came rushing up to say 'Here there are good girls. If you want other girls, you go next door. When assured that we were respectable tourists, he invited us in to sit on the elaborate cushions, quilt and carpets. We wished to meet the geishas, girls trained

from childhood in the graces and the arts of serving and entertaining customers. The young ladies wore colourful, intricately patterned kimonos with skilfully arranged hairdos piled high. They were beautiful and elegant and assiduous for our comfort and ease. Tea was served daintily, as demanded by Japanese etiquette. Once we were settled, the girls sang and danced for our entertainment. Several spoke English and were interesting in conversation and in answering our questions.

Nearby were houses where the 'other girls' were introduced or rather, displayed and where, it would seem, the main commerce was bodies. Although, as in most things Japanese, there was a certain elegance, if some this display was so blatant that, as one of our party expressed it, it was 'off-putting.'

I was sorry for the two young Americans whose wealthy fathers had treated them to this world trip as a reward for graduating from college. Friends back home had given them the address in Tokyo of a 'special lady who would initiate them into the secrets and techniques of sex. They had been looking forward to this for the whole voyage. Unfortunately, they were stricken by disease from their visit. The cure in those days was long and distressing. They were forbidden most pleasures of the flesh, including alcohol and dancing. For the rest of the voyage they had to report daily to treatment and spend most of their time reading quietly in a corner of the deck. They deserved sympathy.

In England tales had circulated that Japanese crafts and especially their armaments industry were prone to copy most Western products by industrial espionage. Rumour had it that Vickers, the great shipbuilding firm on the Mersey had deliberately exposed the plans of a new torpedo boat. These were filched and filmed by the Japanese, who set about building six. The designs had been altered and caused disaster for the Japanese, for when launched, the boats immediately capsized. In hindsight, we know that Japanese inventiveness has not only made up any leeway, but leads the world in many fields. Their techniques of scientific research and application have made them masters in the fields of electronics and engineering.

Legend would have it that, when in the 1850's the British squadrons and the Americans under Commander Perry arrived in Japan, (an advent later romanticised in *Madame Butterfly*), the small-statured Japanese were amazed at the height and physique of the visitors. In the First World War when the Japanese joined the Allies, they decided it was important to build physique and height. Previously, standard dress was the kimono and sandals held by a strip between the toes. Free movement was hampered and walking was in short, practically shuffling steps. Active exercise was limited and diet was largely rice. Thereafter, by Imperial edict, all boys between six and sixteen were to wear a type of sailor-suit with short pants, and sneakers. The girls' kimonos were replaced by a blouse and skirt. The diet of all children was changed and exercises were compulsory at all schools. By the time of the Second World War, the height of the Japanese had increased by an average inch and three-quarters—striking proof of the value of diet and exercise. It has been observed, however, that most national physiques alter each five or six hundred years.

From Japan to Hawaii we had a few days of untroubled seas. As we circled the globe, we twice crossed the International Date Line when we either lost or gained a day on the calendar. Crossing the Pacific the ship's newspaper was headed 'May 14th' on consecutive days and this was puzzling. Whence the news for the extra May 14th?

The Royal Hawaiian Hotel in Honolulu had the reputation of being one of the world's few really great hotels. Spending three days there convinced us that this was so. Set in an extensive garden of trees and flowers and of elaborate design and furnishings, it established an atmosphere of grace and luxury. The service was superb. Papaya, served on the beach, was the delicious basis of perfect breakfasts.

We sailed in Pearl Harbour among American warships little suspecting that at a not-so-far future date the bombing of this attractive site would bring the United States into a world war. We played golf on the verdant Royal Hawaiian course where freeways were manicured as perfectly as greens elsewhere and the greens rivalled billiard table tops. The green on a short hole topped a rise and was protected by a pond into which the first three members of our four ball plonked their tee shots. My ball bounced on the water twice in a 'skim', before landing on the green. The others yelled their dismay and came at me with their putters when I explained 'I knew the water here was hard'.

Another unruffled sail, this time to Los Angeles, a visit marked by a series of fond farewell parties. The final fling was a party given at her home by a patient from the movie suburb of Hollywood. It was as artificial as the movies, unpleasantly characterised by effusive and false back-slapping. The old hands warned us that shipboard friendships were such that farewells really meant farewell with perhaps an occasional Christmas card to mark the flight of years.

I had read much about the Panama Canal without realising the magnificence of this American achievement. Bisecting two great continents, from Balboa we traversed the Canal in eight hours. The staff served lunch on deck that we might not miss any part of this experience, allowing our imaginations play between continents and oceans.

It was a six day sail to New York where a few days pause reverted the ship to a trans-Atlantic liner. A passenger, Jane Cook, and her family invited me to visit them in New Jersey. Their home was an attractive estate. We were received in a grand manner which, in the British sense, might be described as more 'County' than county. Meals were formal, served by Black butlers in white gloves. Jane's mother was a good-looking lady, of impeccable carriage with studied, almost imperious manners. Seated next to her, I ordered a tomato juice. To my British pronunciation, she turned quite indignantly and asked: 'Do you say potato or potah-to?'

But my visit passed pleasantly and a few months later Jane and her cousin, Louise McKelvie came to London when I was happy to escort them to theatres and to strawberries and cream at Wimbledon and to discuss the differences from New York.

Returning across the Atlantic to her home-port of Liverpool, the beautiful Franconia was empty of all but memories, so I had to be content. with writing letters and making notes for my future. It took me some time to realign my thoughts from the fading unrealities of the cruise, but I was soon involved in new and exciting projects.

## Chapter V Hard Work and Good Fortune

After six months of virtual vacation on the world cruise I was ready for work, if possible constructive! I applied for and was appointed Resident Medical Officer to the Leasowe Open-Air Hospital for Surgical Tuberculosis and Crippling Diseases of Children. The appointment also allowed attendance on the course for Master of Orthopaedics at the University hospitals of Liverpool. Overall, working at Leasowe with Ron McEwen, and for the M.Ch. (Orth.) with MacMurray and other members of the Faculty was satisfying and particularly stimulating. Leasowe is a delightful spot on the coast in the Wirrall of Cheshire. Residents' quarters were exceptionally comfortable and I was even paid a salary!

To enable me to do the necessary travelling I bought a ten year old A.C. for £25. It was a two-seater with a dickie—a beautiful car. It had leather upholstery, a polished wooden dashboard and a rich sounding engine. To reach Leasowe from Liverpool one passed under the Mersey through the newly opened tunnel, several miles in length. Halfway across on my first booming and happy way disaster struck—the differential fractured. To be towed out of the tunnel was expensive and moreover, the model was no longer in production, so the garage had to advertise for a replacement part which only arrived weeks later. Thereafter the car behaved impeccably, giving me enormous pleasure and satisfaction. We explored the beautiful countryside of Lancashire, Cheshire and North Wales and enjoyed many happy outings. Having a car enabled one to spend the weekend after matches away from Liverpool and, with Joe Edgar, Keith Lucas and others I did so to walk or climb the fells in the Lake District and in Snowdonia in Wales.

'Babe' Kirschner, an old friend from Cape Town, on the staff of a Liverpool hospital, would arrange a weekly four ball at the famous Wallasey Golf Course opposite Leasowe Hospital. I played each time with the totally misplaced confidence that in the past week my game had improved and that I might have cured a terrible slice. A third hole was separated by a wire fence from the busy coast road. It was my turn to drive. I drove and sliced. My ball crossed the wire fence and hit an approaching car windscreen head-on. Fortunately it did not break the glass and we pacified an indignant driver. The next week when we approached this hole, Babe cautioned me to wait until he signalled me to play, but at that very moment, a car turned in from a side road and lo and behold, once more I hit the windscreen bang on! This time the driver was more indignant. We reckoned that the odds were similar to doing a hole in one to hit a moving car nearly two hundred yards away in the same way twice running gave odds almost impossible to compute. Apart from these incidents we enjoyed the weekly diversion.

On another occasion, 'Nobby' Roberts, captain of the Royal Liverpool Course at Hoylake, invited me for a round and dinner. The acreage of the greens at the Royal Liverpool was vast. Putting was another of my major weaknesses and the afternoon was a consequent misery: a driver might have been more appropriate than a putter. A consolation was the pleasant dinner at which Nobby, in the club captain's traditional 'pink' tails, and I were regaled.

Soon after these episodes, in Cape Town during the period of our engagement, Nathalie, thinking to participate more actively in one of my pastimes, had essayed golf lessons. The pro took her to the Green Point Common, not far from the centre city, for a first round. At the third hole, a short 130 yards, he handed her the driver. She asked 'Where must I hit it?' He pointed to the flag on the green and she promptly did the hole in one, a feat which was later reported in the press. At the time she had no idea that this was especially out of the ordinary and was astounded to find herself acclaimed, and even more so when she had to treat everyone in the clubhouse to a round of drinks. When

applauded, she replied: 'Well, if that's the golfing ultimate, there's absolutely no point to it and never played another game.'

Leasowe Hospital housed 180 patients and the work was straightforward. In those days, the treatment of bone and joint tuberculosis entailed long, sometimes years of hospitalisation, much of it in bed. Limbs with local infection were treated in splints or in Plaster of Paris. Many had discharging sinuses which, when encased in plaster, reeked both in the room and to high heaven. The plaster clinics once a fortnight, or more often when necessary, became an unpleasant chore. After investigating the problem, we came up with a partial answer - to encase the limbs in carbon-impregnated bags.

After long immobilisation in bed, the patients' bones became thin and brittle. Tragedy would strike when they attempted to walk. A stumble would fracture a leg and the eager patient would be back in bed or on crutches for months - a devastating frustration. Surprisingly enough, the children, resigned and docile after the long stay in bed, would be philosophical about these setbacks.

I was appalled and decided to spend time in the library on the decalcifying and weakening processes of osteoporosis. This led me to consider a structured research programme, for which I was awarded the 1938 Ridgeway Scholarship of the University of Liverpool.

Three of us became assistants to Sir Robert Kelly in the Research Department and were thereby favoured. Alan Kerr, eventually a leading neuro-surgeon, later left to take up a research scholarship at the Royal College of Surgeons and continue his work in London. Ronald Edwards became assistant to Morrision Davis, a pioneer in chest surgery. I occupied the orthopaedic slot.

Alan Kerr was leading student of his year whose equable and outgoing nature combined studious activities with athletic prowess. His parents ran a guest farm which included in its attractive grounds the Swallow Falls on the lower slopes of Mount Snowdon. A pleasant outing was to climb the 'Four Peaks' of the mountain, although at the very top I was always nervous transversing a narrow ridge with precipitous sides. Some sociable weekends were spent in the warmth of the companionable family. Alan enjoyed country walks as much as I did but differed in that when we reached a rocky outcrop, he would struggle up and down the steepes, whereas the simpler walk round the base would appeal to me.

Ronald Edwards was also a good friend. He made a cheerful companion and I spent an occasional happy Sunday in his home.

Besides being a great surgeon, 'Pop' Kelly was a charming, warm and kindly man. We were devoted to him. He took over a large comfortable room in the basement of the Medical School which we dubbed 'the Research Centre'. He spent every Wednesday afternoon with us. The room was sparsely furnished. As a gift for him, we bought second-hand a ponderous stuffed armchair. The subsequent Wednesday we arranged a special tea to instal Sir Robert in the 'Chair of Surgical Research' with fitting pomp and ceremony, much to his amused appreciation.

He was intrigued by my work on calcium metabolism and sometimes an early morning 'phone call would summon me in a rush to his home before breakfast. In Rodney Street, I would find him dressed and absorbed in some deposit of calcium he had found in the previous day's operation. 'How did it get there, and how does it fit your theories, and what lead does it give us in treatment?' The questions assaulted my still sleepy consciousness. He was a stimulating chief who added an aura of excitement to our efforts. I ate, slept and dreamt research.

Because of my experiences at Leasowe, conditions in which bone lost mineral salts, especially calcium, were my particular interest. Biochemical and metabolic studies all unsuccessful—had been carried out worldwide in an attempt to replace calcium through increasing the intake of this mineral by mouth, by injection or by inunction. As a balance existed in the circulation between calcium salts and the phosphate radicals, to me it seemed logical to reduce the phosphates, thereby at least maintaining calcium levels, and possibly increasing them. In other words, I was suggesting that depriving the body of phosphates would restore bone tissue.

The first patients involved in the trial suffered from generalised fibrocystic disease, which I considered and labelled 'secondary hyperparathyroidism' as they had no obvious primary hyperparathyroidism due to parathyroid adenoma (von Reckinghausen's disease).

Aluminium salts would limit phosphate absorption from the diet. The aluminium salt had to be soluble, non-toxic and equal to combining with the phosphate and be precipitated unchanged in the bowel. The tests to establish this novel idea were complicated, but the chiefs of various departments and colleagues were helpful and co-operative.

The Professor of Pharmacology at the University, W.J. Dilling, an imposing 6 foot, 3 inches of friendly Scot was popular with his colleagues and students, despite his dry manner of lecturing. Pharmacology was a dull subject which he embellished yearly with only two aphorisms, both about alcohol: 'Alcohol is a preservative. It preserves the sorrow for the morrow' and 'Alcohol makes you feel as you ought to feel without alcohol. These adages had been circulated ahead of his classes. Successive classes waited for them and duly acclaimed them with cheers and laughter.

When approached, Professor Dilling was immediately helpful. He arranged to have a mixture of aluminium sulphate made up. We did not realise how extremely astringent the solution was. We met in his office to test it. He handed me a spoon. I took a taste and was immediately tongue-tied—my tongue sticking to my palate. Helplessly, I grimaced and gesticulated at him. He looked at me and said: 'It can't be that bad'. He took the spoon himself and swallowed some, to become tongue-tied as well. So there we sat, mouthing at each other the funniest sight. He grabbed a pad and wrote: 'Obviously this won't do'. He rang for his secretary, instructed her to make a pot of tea and half an hour later, when the tea had done its work, we were able to mumble at each other.

We obviously needed a syrup or similar product to counter the astringency. I approached the pharmaceutical firm of Evans, Lescher and Webb who put their laboratory experts to work. In due course they produced an aluminium sulphate based solution cloaked with a syrup—a mixture palatable enough to be taken by children. They called it 'Alumevan'. Unfortunately, it was only later that we realised the obvious properties of aluminium hydroxide which achieved the same results without the disadvantages.

There was great excitement some months later when the first roentgenograms came through showing calcification actual new bone laid down in a number of the patients. We could find no records in the literature of a previous therapeutic success of this nature, so were thrilled by this medical first. This, plus reversal in the calcium balance studies seemed confirmation enough and the work was eventually reported in the British Journal of Surgery of April, 1940. I was devastated when the great Albright of Boston, to whom I had sent an early report of the work some years previously, later published the same material without acknowledging our findings.

Another outcome of the calcium research was its positive application in the prevention of calcium phosphate kidney stones—shades of our 'Amnii Visnaga' trials at Birkenhead!

All good things come to an end. After eighteen months Alan Kerr was leaving to take up his research fellowship at the Royal College of Surgeons at the same time as my Final Examinations for the Fellowship at that institution were due. We loaded the A.C. with Alan's effects and set off to drive the 180 miles to London. Halfway there the engine began to protest. We nursed it as it staggered on, determined not to let us down until, with a final cough, it expired at the door of Alan's new digs. We found a garage that towed it away without charge but watched with regret its magnificent lines and handsome appointments disappear down the street.

The Finals demanded two papers, two clinicals on patients, plus vivas on surgical pathology and the like. Each day fifty-six candidates presented themselves for examination but the average pass rate was only sixteen. When, by custom the same evening, we returned for our results, the atmosphere was tense with anxiety. From the main hall a broad, curved staircase led up to the next floor. On a landing halfway up a College official equipped with a list informed each candidate: 'Mr..., I regret to inform you that you have not satisfied the examiners' or 'Mr..., congratulations, you have been successful. Would you proceed upstairs and meet the examiners?' The failures retreated down the stairs, so it was possible to tell who had passed.

My number was 63, placing me seventh on the second day. I watched as No 57, followed in succession by candidates 58 to 62 sadly descended the stairs. By this time I was so dejected and pessimistic that in reply to his 'Congratulations, Mr Helfet', I nearly blurted out 'Are you sure? It was a happy day for me, but not for all.

This was the time that I had more than my share of academic good fortune. My work on secondary hyperparathyroidism and the role of phosphates was becoming known and various medical personalities in Great Britain as well as in the United States were showing interest and making enquiries. I put in the first report as an M.D. thesis at Liverpool for which Rowley Bristow, head of the Orthopaedic Department at St Thomas', London, and the celebrated bio-chemist, Sir Jack Drummond of University College Hospital were to be the external examiners.

At that time Professor MacMurray had also instructed me to invigilate and to arrange roentgenograms and specimens for the M.Ch. (Orth.) examination. Rowley Bristow was to be external examiner for this as well. Bristow knew me for he had just appointed me his chief assistant at St Thomas' to start the following year. When he arrived, he greeted me, picked up some of the roentgenograms which I had put out for the M.Ch.(Orth.) candidates and said: 'If you can tell me what these are, I'll pass you'. It was a rather pleasant farce as I had actually chosen them myself.

Sir Jack Drummond was an impressive man, a Fellow of the Royal Society and a pillar of the Medical Research Council. My thesis for the M.D. was largely a bio-chemical treatise which he apparently found interesting and of which he had heard from Sir Robert Kelly, a colleague on the Council of the College of Surgeons. We chatted about my theories and he surprised me by saying: The Medical Research Council would like you to continue your work. If you agree, I shall arrange a research grant'. I told him of my appointment to St Thomas' and he agreed my work should continue there.

It seemed good fortune was now a handmaiden. The Commonwealth Fund had been established by an American to encourage young men to expand their horizons in the United States. Twenty-five Fellowships were awarded annually to British and Commonwealth university graduates. They were liberally funded and much sought after. That year, Alistair Cooke, celebrated international newspaper correspondent and commentator on the American scene, was a recipient. It was suggested to me by the Secretary of the Fund that I apply for a Fellowship. However, Sir Robert Kelly, seconded by Sir Jack, proposed me for the Moynihan Fellowship of the Association of Surgeons of Great Britain and

Ireland. The Fellowship was to honour the late Lord Moynihan, and was to be awarded each year to the 'most promising young surgeon in Britain'. It was hard to believe that it could be me. In due course I went to London for the interview and was appointed the second Moynihan Fellow with a grant of £350 for the year. I debated the relative advantages and in the end, on the advice of Sir Robert, accepted the Moynihan, a move I have never regretted. Moreover, Sir Jack Drummond, true to his word, arranged that the Medical Research Council would pay me £200 a year and suddenly I was affluent! Also through him, a young M.Sc. student was appointed to do the bio-chemistry in the laboratory allotted me at St Thomas'.

Sadly, after World War II, while camping with his family in the South of France, Sir Jack was murdered in his sleep. It took years to nail and sentence the culprit, a local forester.

Bristow had asked MacMurray if he had a young man suitable to be his chief assistant. MacMurray nominated me and I had been to London where I was interviewed by the Board of Governors of St Thomas' and then by Bristow and George Perkins, his second-in-command. St Thomas' and Harley Street were rather over powering but Bristow soon put me at ease. Perkins, however, asked some searching questions and then turned to Bristow and said: 'He wants to come because he'd like to be in London'—a disconcerting moment.

However, despite this, I was appointed to an enviable post at St Thomas', with work in the wards and a laboratory to continue my research; all this with Bristow and Drummond keeping a benign eye on me! I would have enough to live on in reasonable comfort and Bristow told me I would also be appointed to his open-air hospital in Pyrford in Surrey where I would do rounds two afternoons a week. This hospital is now named 'The Rowley Bristow' in his honour.

A Mrs Perrin, widow of a prominent surgeon from the London Hospital, had a charmingly furnished house in Upper Wimpole Street. She would let me a room and bath and provide breakfast, an admirably suitable arrangement. Also, when seeing any patients, I could use her late husband's handsomely furnished consulting rooms in the house. I did not expect to be using them very often, but it was good to know they were available.

St Thomas' is on the Embankment, a convenient and comfortable walking distance to Upper Wimpole Street. Every time I walked to St Thomas' passing the Houses of Parliament, centre of the Empire, I thought to myself: 'St Thomas', Moynihan Fellowship, Medical Research Council, Wimpole Street: what a long way from Calvinia' and I touched wood.

The clinical work at Thomas' was not as arduous as in Liverpool. I assisted Bristow on his operating days. For our clinic afternoons, Bristow consulted and taught in the main room and the other three rooms were occupied by Perkins, Ronald Furlong and myself. I could also use the private wing of the hospital or Bristow's rooms at the London Clinic for private practice.

At first I was treated with some circumspection. Thomas' was very inbred and the ideas of newcomers were met with reserve. Sometimes Bristow would ask me to teach, usually on cases requiring academic discussion, rather than purely clinical procedures. One day a student came up to me and asked: 'What is a highbrow like you doing in this outfit? I realised that, besides the differences in the topics I taught, Bristow, Perkins and Furlong were all good-looking Englishmen with low foreheads and there was I, with a forehead halfway up my skull! However, I enjoyed it and did my rounds in the male and female wards with relish.

Twice a week I would drive across the Thames into Surrey to do rounds at Pyrford. Perkins, an erudite surgeon, was always there and we would have keen but pleasant discussions. I had been

much influenced by the conservatism of MacMurray and the Liverpool School. Perkins, on the other hand, questioned everything and it took some time before I found my happy medium.

The super surgeons in Great Britain had their own very select club. Lord Moynihan of Leeds, Sir Robert Jones and Professors Wilkie and Fraser of Edinburgh were among the original members, all legendary figures. They would visit each other's units where the host would exhibit his surgical prowess in a series of his favourite operations. On one such occasion in Liverpool, Denys Wainwright, MacMurray's senior registrar, and I were asked to arrange MacMurray's list. We chose operations of which he was fond and at which he was the most adroit, viz., two meniscectomies, one operation for recurrent dislocation of the patella and a sub-trochanteric osteotomy for osteoarthritis of the hip, a procedure which eventually acquired the eponymous designation of the 'MacMurray Osteotomy'. The patients were prepared on the table and MacMurray, already scrubbed and gloved would walk in, make the incision, do the operation, and we would sew up. The operations were performed without pause or hesitation and the four took exactly one hour. MacMurray's operations could be dramatic!

The atmosphere with Bristow and Perkins was in complete contrast. Bristow was liberal in his views, always concerned for the patient, stressing the clinical aspects and very prepared to listen. Indeed, he would invite the opinion of Perkins or any other of his assistants. He was a man with an open mind; thus Outpatients were stimulating occasions. Perkins was the opposite—an introverted orthopaedic philosopher who questioned every statement and every opinion, an excellent stimulant to independent thinking and very good for me after the dogmatism of Liverpool.

Bristow's routine advice to new assistants was 'Never miss an opportunity, you never know when you will have another'. He gave me an instructive lesson on private practice. While busy at Thomas' I received one of his terribly polite commands: "Would Mr Helfet see a patient with Mr Bristow at his rooms in Harley Street this afternoon?" The patient proved to be an exuberant, obviously well-to-do businessman from the Midlands. We examined him and after discussion decided he had a torn cartilage in his knee which should be removed. The patient seemed to accept this advice and asked: 'And what will the fee be, Mr Bristow?' "My fee will be seventy-five guineas.' The patient looked at him and said: 'Mr Bristow, isn't that rather heavy? It is, but if you want it done rather better, Mr Perkins will be pleased to oblige for fifty, and if you want it really well done, young Helfet here will do it for twenty-five.' I need not relate who did the operation with me assisting!

In my opinion Rowley Bristow was one of the greatest clinicians in orthopaedics. I enjoyed being with him and became devoted to him. Very sad for me and the many disciples who also held him in affection, Bristow died of cancer at the comparatively early age of 62. After his death I was upset to find there was no mention of a memorial. I could not afford to establish a lecture or scholarship as a tribute, so decided to dedicate my paper on Corocoid Transplant in the Treatment of Recurrent Dislocation of the Shoulder to his memory. In this spirit I sent it to Watson-Jones, then editor of the British edition of the Journal of Bone and Joint Surgery. He wrote saying he was against eponymous articles, so changed my dedication to the statement that I had 'shown the operation to Bristow. Actually, Bristow had not seen or done the operation, but I wanted to call it "The Rowley Bristow Operation'. In due course, it has actually received this credit. At a recent meeting of the British Orthopaedic Association when the operation was discussed, Alan Apley who had been on the staff of Thomas' with us, told the story, which has led to references to the 'Bristow-Helfet Operation'. But I am happy when Bristow is honoured. He was extraordinarily kind to me.

At that time, Bristow was President of the British Orthopaedic Association and in lively association with his colleagues. Sir Herbert Barker was a controversial figure, renowned for his prowess as a

manipulator. He had progressed from a country background through the ranks of the bone-setters. Public opinion rated him highly and indeed, for treating members of the Royal Family, he had been knighted. It was typical of Bristow to invite him to Thomas' to demonstrate his skills before the British Orthopaedic Association. To find the patients for the demonstration we assembled a collection of 'toes', 'feet' and 'knees'.

Barker was a beetle-browed, intense man. He would stare at the patient, ask what the trouble was, do his manipulation, and then say to the patient: 'Do you feel better now?' The patients were overawed and each said: 'Yes'. When Barker asked them to walk they did so slowly, but without apparent distress. But when we conducted them back into the ante-room, several actually collapsed with pain. We asked each to report again the next day. A number of them had swollen joints from the manipulation and some obvious distress. We reported this to Bristow, who 'phoned Barker. He agreed to see them again the following week—when the same thing happened: Barker stared at them, awed them, and said: 'Walk' or 'Move' which they obeyed, but again in the ante-room the position was reversed. However, there were patients who obtained relief, or were at least improved.

Sir Thomas Fairbank was the 'Great Gentleman of Orthopaedics', a considerate and very kind man. On a visit to him in London, I had learnt how a chief should treat his juniors. Sir Robert Kelly had met Fairbank at a meeting of the College Council, had told him of my work and Fairbank expressed a desire to meet me. A charming and friendly letter of invitation followed, actually instructing me that I could come to London on the morning train from Liverpool and he would put me on the evening train back. In those days one could make the return journey for 10/6.

Duly arrived at 84 Harley Street, I was welcomed like a VIP in his elegant rooms. Lunch over, he told his secretary, much to her dismay, to cancel all appointments for the afternoon so that he could spend the time discussing my work. We had a very interesting session, during which he showed me the illustrations, roentgenograms and manuscript of his book on diseases of the skeleton which was soon to be published and achieve fame. In time his Rolls arrived to take us to a splendid dinner and return me to the station to catch the midnight train for Liverpool.

The two outstanding physicians in my experience were Henry, Lord Cohen of Birkenhead and Lord Horder, Physician to the King. When with Rowley Bristow, if we required a physician's opinion on a patient, he would send me to Lord Horder. I would relate the history, describe the clinical findings and show roentgenograms and the results of any other tests. Horder was always considerate to the messenger and would discuss with me and deliberate seriously before stating his opinion; so one could appreciate the reasons for his pre-eminent reputation. I was intrigued to find that the great man encouraged leeching and cupping in the treatment of infections and swellings. Luckily modern antibiotics have since supplanted this usage.

Henry Cohen, son of a small shopkeeper in Birkenhead, had distinguished himself at every level of his schooling and his intellect and scholarship advanced him to all the major honours of his profession. Even as a student his reputation preceded him. At his anatomy examination, the examiner posed a question to which he replied: 'Well, Gray says such and such, Cunningham says this and Frazer says that'. The examiner looked at him, grinned and asked: 'And what did Jesus Christ say?'

After qualifying he became the youngest 'honorary ever to be elected to the staff of the Liverpool University Hospital. He had an encyclopaedic memory and could apply his knowledge superbly—a rarer combination. He was invited to deliver every distinguished eponymous lecture and initiated and was involved in a number of brilliant research projects. In direct succession to Sir Charles Sherrington

whom he particularly admired, he was much sought after for his outstanding neurological opinions. He was Sherrington's biographer in a volume which occupies a treasured spot in my library.

A favourite lecturer before he succeeded John Hay as Professor of Medicine, after I qualified we became firm friends. He referred to me as the only physician practising orthopaedics'—a gratifying, if undeserved, opinion.

During World War II he was physician to the Cabinet. It used to be said that no English nobleman would die without first seeing Henry Cohen. I thought this was probably apocryphal, so asked him about it. He said: That's quite true... But all they wanted to be told was that nothing more could be done'.

He was an impressive and pleasing presence and a fascinating conversationalist with a deliberate choice of phrase, and to my knowledge, with never a derogatory remark concerning friend or acquaintance. Nor did I ever hear anyone speak unkindly of him. In after years, when in London, to dine with Henry was a primary pleasure. He was devoted to his mother who died in her nineties. He never married although his attachment to various glamorous ladies, mainly of the stage, was rumoured.

Shortly after I started work in London, the captain of Thomas' Rugby Club asked me if I would coach their team. The previous year they had done well and had reached the finals of the Hospital Cup in which they had played St Mary's, winners of the Cup for several years in succession. The season was half over, but I put them through some paces. Came the big day of the finals: it was an exciting match with the teams level until, near the very end, Tommy Kemp, the English International fly half, put over a drop kick which clinched a win for Mary's.

In March 1939, my marriage to Nathalie Freeman was the momentous first building block in our family history. Keith Lucas, who had been a protégé in the Liverpool University Rugby team, was my best man. His wife Sally was also a close friend of Nathalie's. We were married at the Marylebone Registry Office, followed subsequently by a simple religious ceremony in St John's Synagogue. Mrs Perrin put her house with its elegant drawing room at our disposal for a joyful celebration.

We were astonished and amused when Nathalie was asked to tea with the Matron of Thomas'—obviously to be vetted! This was a formal and elaborate occasion in the tradition of the 'School of Florence Nightingale'. The School of Nursing at St Thomas' had been founded by the celebrated Florence—their prime claim to distinction; her covered cart used in the Crimea was a special exhibit in the main hall. Nathalie told me that the matron, a sprightly lady, had presided over a silver tea service with all accoutrements and embellishments meticulously included in the ceremony. Each guest in turn was called up to have the privilege of sitting next to and talking to Matron. Nathalie was inspected for suitability with more care than was her husband.

## Chapter VI The Drums Beat

Two years previously, with likeminded friends in Liverpool, I had become concerned at the malicious bent of Nazism and its votary, Fascism. At that time Lady Astor and the Clivedon Set were promoting 'Friendship with Germany' and Mosley's Black Shirts were brutalising the East End of London. We felt bound to indicate our opposition. Also, war seemed inevitable and we determined to play our parts. To show our readiness and our detestation of the Nazis we joined the Territorial Army in the hope that the coming outbreak would at last be the War to End All Wars. Instead, the bestialities of the ovens of Auschwitz and the immediate and later implications of the bomb on Hiroshima presented the world with more profoundly disturbing alternatives. Unfortunately, the well-intentioned mission to prevent a repetition was badly designated, or perhaps mankind suffers a malignancy in its purpose.

The Deputy Director of the Medical Services suggested I join the Cavalry Field Ambulance of an old Cheshire regiment honoured by its military traditions. Invited to dine and somewhat awed, I entered the mess to find everyone in full mess dress, the walls adorned with pictures, portraits and the silver and memorabilia of regimental occasions and campaigns. However, a number of the officers were friends and soon put me at ease. We dined honouring every custom. After passing the port and toasting the King, we repaired to the Colonel's den. With the Adjutant, he gave me a rundown of their history. I denoted my willingness to cast my lot with them but remarked that I had not been on a horse for some years. This did not seem of importance until they asked my weight. 'Over 180 lbs.' says I. They were crestfallen: this would be a strain on their steeds. And so I was referred to a unit without horses—I must confess with some relief on my part since a war on horseback did not particularly appeal to me. I discovered only later the Medical Services were all to be mechanised.

Training for a night a week in Chelsea Barracks, plus two camps of a fortnight each with the Infantry Field Ambulance to which I was allocated was evidence of the innocence of our preparation for war. The first was on the Isle of Man, a pleasant time, instructive in basic skills such as compass reading. For one map reading exercise I found the location to which we were to motor was in the middle of the Irish Sea and pointed this out to our instructors. There were some red faces! The second camp, held adjacent to Netley Military Hospital in Southampton, we regarded more seriously as everyone felt the imminence of war.

In London I was transferred to the First London General Hospital with headquarters in Chelsea Barracks. The uniformed presence of the venerable Chelsea Pensioners, soldiers living in the 'grace and favour' barracks, imparted a sense of Army tradition and continuity.

As new units were established we became the Twenty-fourth Territorial General Hospital. On the 1st September 1939, two days before war was declared and among the first to be mobilised, five of us were posted to Hatfield in Hertfordshire to plan the conversion of Hatfield House, home of the Cecil family, Earls of Salisbury, into a military hospital. The main body of the Twenty-fourth followed shortly, the major portion of whom, however, was soon transferred to Northern Ireland leaving key personnel, mostly from the London teaching hospitals, as the cadre of the Thirty-fourth General Hospital. I was put in charge until the new Commanding Officer, Colonel Harwood, arrived soon afterwards with a Regular Army adjutant, an Australian. Harwood, a dental surgeon in peacetime, was an admirable CO, fair, gentle and approachable, yet firm—a great favourite of the Unit. We became an efficient and happy establishment.

Hatfield House is one of the showplaces of England and was well maintained by a contented and devoted staff, an example of feudalism at its benevolent best. The beautiful grounds, an extensive

10,000 acres, included, besides the main house, the old palace of Queen Elizabeth I and several tremendous lawns. One in front of the House itself had been used for the battle scenes and parades of the movie Henry VIII with Charles Laughton.

My duties involved the conversion of the 'Long Gallery into a sixty-four-bed ward and the Dining Hall for twenty beds. It was an education in history. From the times of the Crusades the Salisburys were firmly in the tradition of prime-ministers and other rulers. The Gallery carried the Holbein portraits of the six wives of Henry VIII and, inter alia, treasures from India and the Far East. From the ceiling of the Dining Hall hung the battle flags of the Battle of Waterloo and other campaigns. I shuddered to think how the carved Tudor panelling in each of these chambers would be wrecked by the modern reality of iron beds occupied by eighty-odd British Tommies. Protection merited primary concern. I persuaded the clerk of works to put a shield of beaver board six feet up each wall. For this I was given undue credit by the Salisburys, who took a personal interest in our progress.

Our officers were lodged in a wing of the main house. Each bedroom was named after the wood used in the fine antique wainscoting which covered the walls. To modernise, baths were recessed into the substantial walls and the original panelling replaced as doors. I was in the Oak Room, one of those with a bath.

The Salisbury's son, Lord Cranborne, was then Secretary for the Dominions. He had suffered an illness which left him with one lame leg, and later a grandson was accidentally wounded as we watched a demonstration of low level blitz on Salisbury Plain, one of the first practices of this technique by the RAF. Henry Cohen was physician to the Salisburys. He called me in as consultant for the orthopaedic problems and, as a consequence, Nathalie and I enjoyed a number of interesting occasions with the family who remained in residence in one wing of the huge house.

A duty as senior company commander was to take the hospital personnel on route marches. During that spring and summer the weather was particularly kind and lent much beauty to the countryside and environs of Hatfield Park. On walks and on these route marches I would soon be lost in pleasant contemplation. On an early occasion, walking ahead of some 200 men, I was oblivious of time until recalled to consciousness by an amused sergeant major: 'Sir! We've been walking for an hour and a half. The regulation is to march for fifty minutes and rest for ten'. I grinned and the unit grinned; they were beginning to realise my idiosyncrasies.

Church parades were held on Sundays. I would march the whole unit to the charming, olde world church in Hatfield village. During the service the Jewish personnel would wait outside. The unit would then reassemble to return to the large, tree-flanked square in front of the wide steps leading up to Hatfield House itself. Waiting would be the CO, Lord Salisbury and any visiting VIP's or Brass Hats. The unit would march in line towards the house so that, on the command 'Parade left wheel', the right flank would skirt the steps and line up smartly in front of the CO. My soldierly skills were limited and this was always a nervous moment for me, afraid I would finish up with half the unit up the steps. Fortunately, the sergeant major was skilled and supportive. His place was immediately behind me and, at the exact moment, he would whisper the appropriate command. We managed to avoid disaster.

This was the time of the 'Phoney War', so our duties were mainly routine health and training problems. In the early days training injuries provided most of the orthopaedic patients. Interestingly enough, these plus skeletal disorders filled over a third of the beds in the hospital as a whole, and this although the officer in charge of Surgical Division and two surgical specialists were also on the

staff. These numbers demonstrated the proportion of orthopaedics to general surgery and medicine in training large bodies of troops without actual battle casualties.

As in our civilian experience, the general surgeons zealously guarded their right to treat fractures and orthopaedics. At the beginning of the war this applied in the Army as well and I was designated a general surgeon. However, the CO soon decided to put all orthopaedics in my charge and this was unique in the forces at that time. Nearly a year later when Rowley Bristow became Consultant in Orthopaedics to the Army with a number of registrars and assistants to the chiefs, 'orthopaedic specialists' became official. Later Watson Jones and the Airforce followed suit.

The grounds of Hatfield House had been used during World War I for the first trials of tanks and these exercises were still evident from ditches and other obstacles which became the hazards of a nine-hole golf course. I decided it was an ideal venue for a patient rehabilitation programme based on non-violent but competitive games. This became a popular feature but I was surprised when the War Office sent observers to study the programme, apparently the first of its nature in the British Army at Home.

I remember especially two patients: the first was Archibald Stewart, a 6 foot, 3 inch red-haired wild Scot, who after leaving school had joined the Metropolitan Police Force, of which he remained a member until on duty one day at the gates of Buckingham Palace, a guards officer in a low-slung sports car hooted to leave the grounds. Archibald took no notice of the newcomer who in exasperation hooted repeatedly. Archibald continued to ignore the interruptions, but eventually, with hands on hips turned round, walked up to the car and said: 'Patience, old boy! The infuriated officer reported him and Archibald was relieved of his duties as a policeman. In no way abashed, he joined the RAF in time to be in the first Expeditionary Force and was in France after May 10 when the German invasion overran the Low Countries. On a reconnaissance Archibald was shot down and suffered a broken thigh, among other injuries.

The other, Duncan McDearmid, was a stocky Irish merchant seaman reaching a mere 5 foot, 6 inches. He had been in a tanker bombed while at anchor in Brest Harbour. When he was fished out of the water and treated, his Irish temperament was aroused when he found that he was not to receive combat compensation because the tanker was not at sea when hit. Transferred to Hatfield, he and Archibald became bosom pals in mischief. Many a morning when I arrived in hospital the ward master would report some escapade, among them drinking with Lord Salisbury's cook or in the local pub after-hours. They were irrepressible and a constant source of fun and gave the impression that nothing could cause them to lose their cool.

Some time after the rehabilitation programme of exercises and games on the lawns had been established, we were inspected by members of the War Office senior staff. The highpoint was a visit by Queen Elizabeth, now the Queen Mother. She had the ability to converse pleasantly and differently with each patient. Her presence and personality had a profound effect all round. It was a beautiful day. The patients lined up on the lawn, either on stretchers or wheelchairs with those able to walk standing in a line behind. To my surprise, our two worthies, Archibald and Duncan, were literally shaking with nervousness, so much so that when the Queen spoke to the towering Archibald, he standing rigidly at attention, eyes fixed straight ahead, answered her by 'Yes Sir', much to the amusement of all concerned.

Hatfield House and its gardens was a pleasant and agreeable war station in spite of the almost nightly bombing during the Blitz with De Havillands as the Luftwaffe's target. De Havillands was an enormous factory in the village manufacturing Spitfires, Britain's saviours in the 'Battle of Britain' and

Mosquitoes. In the short distance between Hatfield House and the factory there was an ancient and beautiful wood, the shadow of which was mistaken by the Germans for the factory. Whereas we were regularly blitzed, we fortunately did not suffer a direct hit, but the environs were well marked with bomb craters including near misses.

The 'other ranks' were housed in the handsome Elizabethan palace with space for company offices plus sixty hospital beds. Projecting heavenward from a slender chimney was an unsheathed sabre which English legend held was Elizabeth I's warning to Mary, Queen of Scots. The Scottish version was that Mary had it put there as a sign to Elizabeth.

The factor's house in the grounds became the officers' mess. On mess nights military decorum and traditions were observed under Colonel Harwood's amiable eye. But after dinner matters might be more hectic and hilarious. A prime mover was our eye specialist, Henry Stallard, the Olympic quarter mile champion of the famous Oxford team featured in the movie 'Chariots of Fire'. Henry drank only his one glass of port, in which we toasted the King, but the single drink would I suspect, designedly rouse him. The sedate Henry became ebullient and organised such games as indoor touch rugby, using a wastepaper basket as a ball. He gave the lead to many enjoyable and cheerful happenings. Then forty years old, he was himself still very fit and would often take two or three of us on a run in the park. On form and posture his maxim was: 'If you bulge below the belt, it is the beginning of middle-age, but if you bulge above the belt, it is the beginning of the absolute end'.

The roadside inn at Hatfield was 'The Comet', of modern vintage, but definitely the 'Local'. We would dine there occasionally and meet with the RAF officers in charge of the detachment at De Havillands, concerned with testing the newly designed aeroplanes. At the time, the development of the later famous Mosquitoes, which played so prominent a part in the war, was extremely hush-hush. Although high on the secret list, the villagers at Hatfield seemed to know all about it and on test days would come out into the streets to watch the manoeuvres. In this way we also learnt about it. The chief RAF officer, Group Captain Pike, a delightful character who became a dining partner and opponent at squash, was horrified when we told him his secret was common village knowledge.

When the Blitz started, security was tighter. Expecting invasion, everyone was security conscious: 'Careless talk costs lives'. Street signs were all removed. Without a map, driving on unfamiliar roads, especially at night, was difficult and sometimes hazardous. Asking the way, even when in uniform, might arouse suspicion and elicited tardy and sometimes non-replies. A friend of Nathalie's visited her fiancé who had been wounded at Dunkirk. While waiting outside the Shenley Hospital the two girls played 'Battleships' on a lined pad. Crosses are pencilled for and where each 'ship' is 'sunk'. A few days later two security men arrived. They wanted an explanation for the marks of the crosses which showed up on the under sheet. After Dunkirk this caution was justified and comforting in a military hospital.

On the day war was declared I drove Nathalie to Basingstoke in Hampshire to stay with the Youngs, family of a Thomas' colleague. I was pleased to picture her safely in the country while I performed classic feats of surgery saving life and limb by the hundreds and with a conscience-satisfied by work well done.

Nathalie was to help the Youngs with London evacuees. Two weeks' later, when no evacuees had arrived, she decided to return to London (against my wishes). Mrs Waterson, wife of the High Commissioner, and other ladies formed a South African Voluntary Service, of which Nathalie became the honorary secretary. They were given office space in South Africa House in Trafalgar Square.

At the outbreak of war, whereas the other Dominions immediately organised units to serve overseas, South Africans were limited to service in the Union. At that stage, South Africans who wished to serve overseas had to make their own way to Great Britain and enlist there as volunteers. It is surprising how many did. When they arrived in Britain they were without home support, comforts or entertainment. The ladies of the S.A. Voluntary Service obtained lists of South Africans serving in Britain and distributed regular gift parcels to them. When these were fully catered for, they also, supplied woollen comforts to warm sailors in destroyers and submarines. Extraordinarily generous supplies of cigarettes and other comforts including thousands of handknitted garments started arriving from voluntary workers in South Africa. Unfortunately, Nathalie thought it would be improper to send me any gift parcels, so I was probably the only active serviceman who never received a single cigarette. Her high-mindedness seemed a raw deal.

When the bombing started, both work in Trafalgar Square and home in Gower Street were in the target area and had daily reminders of the war. On several occasions after a raid, we would pass a house with several rooms cleanly excised. We once saw exposed an exquisite porcelain vase intact on a mantelpiece in an otherwise shattered room. When on weekend leave with Nathalie in the Gower Street flat, we would sleep on a mattress on the floor of the inside hall of the apartment—a precaution lest a bomb shatter the windows.

Henry Stallard had a flat in Westminster. He asked me how we coped and I related the hall mattress idea. Back from his weekend leave, he shook my hand vigorously. The night before had been rough; his building shook and woke him. In the morning he opened the door from the hall onto three floors of nothing the whole outside of the building had been sheared off. He was convinced I had saved his life.

All listened avidly to reports of the air raids and the fate and then the success of our pilots and 'planes. The Spitfires, Hurricanes and Beau fighters gave more than a good account of themselves and the fate of Great Britain depended and was improved by their extraordinary performance, peaking on 15th August when over a hundred Nazi 'planes were shot down for the loss of thirty-four of ours and eighteen pilots.

When she could spend a weekend from London, Nathalie and I stayed with the widow of one of the household staff, a pleasant home approximately a mile from the hospital. When the alarm for a raid sounded, if on duty, I would walk through the woods and gardens to the hospital. I remember trying occasions watching land-mines floating down in the search lights on beautiful blue parachutes. When high in the sky they always seemed to be coming straight for one, but fortunately invariably floated off and landed some distance away.

Another favourite lodging was an ancient, intimate inn in Hertingfordbury, with ceilings so low I could not stand upright in the bedroom which was heated by a roaring fire in a cavernous fireplace.

Shipping losses were published and made distressing and hurtful tidings, for the loss of life of the merchant seamen and well as of commodities. When news came that America would exchange fifty overage and resurrected destroyers for the lease of naval bases on Caribbean islands, we felt that the fortunes of war had shifted in our favour.

We were impressed by and grateful for the splendid organisation of food rationing by Lord Woolton. Civilian diet might be somewhat dreary, but no one need go hungry. Items like bread and potatoes were always available and the points system for other foods worked well. In the cities particularly rationing was strict and everyone was limited to one shilling and tuppence of meat a week. However, rations for children and servicemen were more liberal. Nazi submarines took a heavy toll of the slow

Atlantic convoys and we could tell if a lost ship was carrying a major supply of some item, for the next week the number of points for that product would be increased. But few complained and we heard no stories of a black market.

When I left for Africa, Nathalie found a small cottage near Harrow in the Fighter Command Headquarters area. It did not improve her risks or comfort. Not realising that eggs were plentiful in West Africa, she decided to save some of her meagre ration for my eventual homecoming on leave. The eggs were pickled in an Isinglas bucket. One night a landmine on a parachute exploded nearby. The cottage shook, doors were unhinged and the pictures fell off the walls. Her greatest sorrow was that most of the eggs had been shattered. Life improved when I returned and we spent two years in Scotland.

As the country mobilised, Hatfield became the hospital for anti-invasion command. Combat units training in the area would invite us to their mess nights, which were instructive. Those young Nazi aviators shot down in the neighbourhood if wounded were admitted to the hospital. Their arrogance was astonishing, despite their personal defeat in battle. German propaganda had convinced them that Hitler would invade, Britain would be conquered and they would be rescued to lord it over the locals as had happened on the continent. I remember one youngster on whom we had laboured long with transfusions and surgery. The next day I told him how fortunate he was and what had been done to keep him alive and whole. He had the chutzpah to say he trusted the transfusion was with good German blood. I told him through the nonplussed interpreter that he was even more fortunate. He had benefited by Jewish blood with a shield of David on each corpuscle! Their attitude later in the war when victory for them had become uncertain was very different, often ingratiating.

In May 1940 the Germans invaded Norway. The hospital was ordered to despatch a surgical team to join the British forces in Narvik. Preparations were hurried, the main personal equipment issued to us being sheepskin coats. The thought of sailing in a small ship in the rough North Sea, probably harassed by the enemy, was distinctly discouraging. Fortunately for me and my mal-de-mer certainty, the whole campaign was so quickly over that we got no further than the Clyde. Our return to Hatfield was rather more cheerful than our departure.

My only publication during this time at Hatfield was on the "Treatment of Soldiers' Feet" which was requested by the Journal of the Royal Army Medical Corps. The treatment of soldiers' painful feet by contrast bathing and non-weightbearing exercises was subsequently prescribed by unit medical officers.

After fifteen months we were ordered abroad. At the beginning of the war officers had to buy their own kit tailored uniforms and all accessories— an expensive excursion. For the tropics we were given lists which included 'spine protectors' supposedly to counter sunstroke. Designed for the Crimean War nearly a century earlier, these were thin, quilt-like structures which buttoned on the backs of the shirts. It was soon realised that, far from blocking the rays of the sun, they would be conducive to heat stroke. The instruction was dropped and accepted as another example of stupidity by obsolete military staff.

With our new tropical kit we took train to Glasgow to embark on a troopship, in peacetime used on the regular Indian run. The officers' accommodation was quite comfortable except that we had to double up in the cabins. We were thankful we were not in the holds where the troops were crowded, hot and airless.

Winter was at its worst when we joined a long convoy escorted by corvettes and two small destroyers. On a bleak, stormy Christmas morning in the Bay of Biscay the ship's alarms went off. The

convoy was being attacked by the German battle cruiser 'Admiral Hipper'. All had to report, in formation, with only a coat and life-belt as protection against the frightening menace of the cold sea. I was fortunate in that, whereas everyone else had to muster below decks, as surgeon of the day, I reported to the sick bay and operating room and checked that all was properly prepared. We could hear the Hipper shells overhead. I sneaked on deck to see what I could of the naval engagement, but in the mist could make out only the shell bursts from the Hipper and from our escorting small craft. The pluck of the small ships of the Royal Navy rushing out to tackle the monster battleship reassured our confidence, we were not alone.

While on deck I was joined by Colonel Harwood. As we watched this battle going on he turned to me and said: 'Arthur, m'boy, I hope that today Father Neptune will receive a Christmas present made in Germany, a remark treasured ever since. However, Neptune had to wait for this particular gift almost until the end of the war. The convoy included a British aircraft-carrier on its way to the Far East which apparently caused the Germans to veer off and break from the engagement. They did not realise that the carrier had no 'planes aboard as it was being escorted for duty in India! Only one ship in the convoy was hit and that fortunately, not badly.

The convoy scattered, we were alone in stormy seas without any indication of the Hipper's whereabouts; to wake up on the third morning in the sunny calm of Gibraltar. We were scheduled as the hospital for the force under General De Gaulle which was to 'capture' Dakar from the Vichy French. The defenders of Dakar were not expected to resist, but in the event, they did and so the expedition was called off. Our ship and hospital were diverted to Freetown, capital of Sierra Leone in West Africa, where we arrived early in January.

## Chapter VII Another Africa

Attached to the West African Frontier Force which was to fight in Burma and the Far East, we took over the Wilberforce Barracks, on a pleasant hill overlooking the bay, with instructions to establish a 300-bed hospital. Army manuals which listed every necessity made this simple and resulted in an idle and rather boring three weeks. But this soon changed. Our brief was to determine the best way to manage the tropical diseases likely to affect our troops and also on how to clothe and shoe them—in all, stimulating projects to 'Scottie' Law from the London Hospital and myself, the two orthopaedic surgeons.

It was somewhat ironic that my first posting abroad should be to Sierra Leone for I had gone on record as not minding any posting as long as it was not to 'Black' Africa. But happily, once there, I found compensation.

For all its reputation as the 'white man's grave', West Africa gave us an interesting 17 months. Hot and humid tropics bordered wide deserts, with sophisticated and primitive tribes whose practices, ethics and customs were then still strange to Europeans.

Those blacks descended from the slaves freed and repatriated by America are known as 'Creoles'. They are a handsome and graceful stock, and made particularly good cricketers. In 1941 it was reputed that they had not lost a match against the Army in years. At these matches everything was very 'English'. When the Governor arrived the whole stand rose until he was seated. On the arrival of the Commanding Officer, West African Forces, the same procedure was followed. Tea was served by black 'mammies' in rakish Paris hats.

In a letter to Nathalie I wrote: 'In Sierra Leone the natives are very clean and wash at every opportunity. As one passes through primitive native gardens and settlements, one finds natives either washing or bathing and, to my Western eyes, it is still rather amazing to see whole families bathing in the nude together. The arrival of the soldiers seems to be spoiling the natives. Before the war those from up-country were pleasant and simple. Now all feel bound to dress in as much as they can afford and are becoming acquisitive. Worst sign of all, the children are beginning to beg, though in many cases, funnily enough, they would rather have cigarettes than money.'

Palm trees are common in tropical Africa. They reach various heights and the locals climb them for their nuts and other products. The coconut is popular, with ubiquitous uses: the nuts are used as food, the 'milk' is sweet and refreshing, the fibre provides mats and ropes. Groundnuts are also a staple.

The bush in Sierra Leone is thick and deep. As part of their training, a company was given an exercise: carrying full equipment, it was to 'attack' a nearby village from a point some miles away. Another company was deployed to prevent the manoeuvre. The attackers arrived at the assembly point in surprisingly short time and neither they nor the defence had seen or heard anything of each other. They had cut their individual paths through the undergrowth. Warfare under such conditions had its advantages and disadvantages, depending on which side one was on. The thought of the heat and the teeming, crawling hidden life appalled me.

The African populace presented fascinating problems for the physicians and surgeons of our unit, all from British medical schools. Malaria was endemic and practically the whole indigenous population had enlarged spleens. Visiting troops were under orders to take quinine or other anti-malarial precautions. Situated on the equator, the sun set promptly at 6 o'clock every evening, the land was

dark and we changed to mosquito boots, long trousers and long-sleeved shirts to protect us from the ravaging mosquitoes. Stomach disorders were common and camp hygiene was strict.

For a brief week, when malaria and especially intestinal disorders were rife, it became my lot to be hygiene officer for the command. The largest transit camp was across the road from the hospital. The officer in command was known for well lubricated, often all-night parties. An early morning visit caught him bleary and unshaven. He managed to rise to attention before we did a careful round of inspection. The conditions were dismal, indeed horrific. Back in his office I sat him down and painted a detailed picture of sorry disorders that might be his and his dependents' lot if vigorous cleaning and clearing were not instituted forthwith, the only occasion in my years in the army that I let my anger show to such an extent. It was well merited—the welfare of large numbers was threatened. His beery face took on a wan look, but the next inspection revealed a brisker staff of orderlies and a near spick and span camp.

In the early days before we found our interests and were occupied, the looming inactivity depressed me, so I could write to Nathalie: 'Freetown... with its boredom, lack of interest and even worse, because it is 3 000 miles from home'. In the mess, time hung heavily and at all hours one could see solitary figures coaxing decks of cards into line while playing patience. The army insignia in West Africa was a lion about to pounce. In our black mood we felt it should be a lion dormant, or, at very least, couchant.

We were told that a danger in West Africa is developing 'West Coast Memory' after a time, that is, one loses some power of concentration and is unable to recall details such as names. I thought that perhaps one lost a sense of time as well for it seemed absolutely years since leaving Great Britain; the days were so much alike, it was sometimes difficult to place an incident within the timespan.

When idle in the Tropics, one is often in the mood to be irritated, and, being in that frame of mind, find many little things to wax annoyed about.

Again writing to Nathalie, I penned: I am fed up about being consultant orthopaedic surgeon to Freetown. At my age I want to do the cases myself. Why should I be asked my opinion and advice and then have to see others do it—perhaps not as well as I could! The trouble is they feel they are paying me a compliment when they ask me. Tommy Hunt, Officer in Charge of the Medical Division, had a moan with me. He feels a bit lost too, the solution being to consider this only temporary and, in the meantime, find some other interests. We will look even harder for something to research on. It might be a good idea to learn sketching.' In the event, I asked her to send me books on sketching and on the crustaceans which existed in wanton profusion in the placid seas of the equator. It would be interesting to study the development and manner of calcification of the shells. All mail was carried by sea. It took over three months for a reply or parcel and by the time the books arrived, we were so busy that academic research was hesitant.

Fortunately, for me the periods of boredom became briefer and briefer. One morning I spent at the Alfred Jones Laboratory in the Connaught Hospital in Freetown, wading through old textbooks in their libraries. I looked through a couple on bones published in 1921, only twenty years earlier, and realised the swift progress in knowledge of disease and practice of medicine. Reinforced by awareness of the birth of nationalism by the black masses of Africa and the apparent emergence of social conscience in every free country expressed in the rhetoric of anti-Hitler revulsion, it made me conscious that a renaissance, even a revolution, was going on world-wide.

Most members of the Unit developed particular interests. One distinguished radiologist, a burly Australian, took and assembled a remarkable collection of original pictures, including an engrossing

x-ray of a python curled comfortably, apparently in a man's belly. He had no fear of snakes and would play with several large specimens which had the freedom of his laboratory floor. Most of us were chary of, and found urgent reasons to avoid entering his slithering domain. Many of the officers confused enjoyment with happiness. An anaesthetist from St George's Hospital in London, Johnny Johnson was the product of an affluent and privileged background. To his army life in West Africa, he brought with him the luxuries of his London bachelor environment, including a car and a motorboat. Although careful of his comforts, he was generous in his ways and in spirit. Amiable and likable, he was appointed Messing Officer, to our benefit, for without doubt we enjoyed the best cuisine in the whole command. When the convoys docked, Johnny would go aboard, to return with boxes of delicacies such as kippers and butter.

RAF units in Waterloo, the seaplane base outside Freetown, flying Walrus reconnaissance 'planes on coastal patrols, presided over choice Sunday lunch parties. These started with pre-lunch drinks at 10:30 in the morning, the food arriving somewhere about 3 o'clock, by which hour everyone was in well-lubricated mood. The food was either palm oil chop or groundnut stew, 'chop' being the local word for food. By midday, heat was at its peak and the parties were suffused with jovial warmth.

We were consulted on both general and personal medical problems and so were popular with the staff and officers of the Government. Captain Sir Hilary Blood was the acting Governor. He entertained us and also allowed us use of the Government House squash court.

On many a Sunday morning, six of us played golf on a roughed out 9-hole course on the beach. We each carried a wooden scraper to flatten the sand before putting. The temperature of the water, though never cold, was refreshing. The routine was a swim, nine holes of golf, a break for Gilbey's gin (it had to be Gilbey's, we all tended to become set in our tastes when away from home) and sandwiches, then another nine holes, bathe and back to the hospital. Two of the six were from the Navy, Freetown being the staging port for all the ships to and from Europe, Africa and Australia. I looked forward to this weekly break.

The depot ship in Freetown harbour was the old 'Edinburgh Castle' anchored in the roadstead at the beginning of the war. It was the centre and club for the crews of the small ships operating in the Atlantic from Freetown. The fleet scuttlebutt would have that it was kept afloat by empty beer and other bottles. We had a happy relationship with, and assisted the Navy medically. The young naval officers, when in port, would enjoy playing squash, cricket and tennis and dining in our mess, and we with them on the ship.

One morning, an operating list was interrupted by an orderly with a Navy signal: 'RPC, Pike'. I had invited 'Pike', who commanded a minesweeper, to dine on his return to Freetown. We puzzled all day and into the next to decipher this message and eventually decided that it must mean 'Regret, party cancelled, Pike', so did nothing more about it. On the Saturday morning a worried Pike 'phoned to ask what had happened the previous night. 'Goodness gracious, I received your message reading RPC—regret, party cancelled and missed you all evening. This met with a gust of laughter. Apparently the signal was standard Navy 'request pleasure of company'. The fleet must have been starved for amusement, for the army faux pas caused a round of hilarity laced with many a pint at my expense.

Sierra Leone was dubbed 'the paradise of plain women'. To see the Naval and young combatant officers dancing round our very ordinary nursing sisters was instructive. The youngsters were lonely and wanted a feminine ear, whatever the rest of the woman looked like. Some of our sisters were a bit spoilt though and we had to pull them up occasionally in the wards.

Officers had to censor the letters of the other ranks—on the whole a boring exercise. One is popularly supposed to learn by experience, but some experiences are of a nature hardly to warrant the effort. In one letter a soldier claimed to be the first man bombed off a lavatory seat while reading Jane Austen'.

That February I should have delivered the Hunterian Lecture at the Royal College of Surgeons, one of twelve honours awarded yearly, but had to cable that I was on active service and could not do so. Their reply informed me I could call myself a Hunterian Professor and publish my paper when my military commitments allowed, upon which they would pay me all of ten guineas. In 1958, when nominated for a second time, I was able to deliver the Lecture in customary fashion.

On the 16th March we heard Roosevelt's great speech promising ships, 'planes, munitions and food to the Allies. It brought a joyful feeling to our throats and we considered it the most optimistic speech since Churchill pulled the country together with his blood, toil and sweat oration.

The Connaught civilian hospital was very busy. Most of the staff had been trained in Scotland and were most efficient in treating large numbers of patients. But, as in the United Kingdom, orthopaedics was a neglected specialty, so Stewart, the chief surgeon was pleased when Scottie and I each offered to do three morning clinics a week. The variety of trauma and skeletal mischief was fascinating and engaged our every skill. Patients with multiple fractures through falling down the branched trees, others crippled by gross malunion, sinuses from chronic sepsis of bones and joints weeping pus copiously, were common. Many arrived from the interior on home-made crutches or were pulled in wooden boxes with an extraordinary variety of wheels. We tackled all with the help of efficient local nursing aids who gave unexpectedly expert anaesthetics using both ether and chloroform. They also assisted at operations. Others nursed in the wards, not always as sympathetically as we would wish, but we were the visitors and had to instruct, correct and occasionally reprimand diplomatically. The patients took pride in their operations and especially in any visible scars and, with the staff, expressed sadness when we eventually left.

A terrible endemic condition was Filariasis, or tropical elephantiasis. An organism enters the lymphatics of the limbs, blocks them and causes gross, sometimes gigantic swelling of the scrotum and legs. Legs become massive, with severe limitation of function. In the streets one might see an African handicapped to the extent of pushing or pulling the enormous tumour on a wheeled barrow or cart. The scrotal enlargements produced clinical, but rarely military problems as Africans with these deformities were not accepted in the Army. Stewart operated on them without a qualm. We were impressed; it was massive and tedious surgery which Scottie and I tackled circumspectly, but after the first two or three, each practised our share.

After the war there were opportunities to compare and contrast our experiences and approach with those of Albert Schweitzer, Alsatian missionary, bible scholar, musician and doctor. Two colleagues and a nurse of my acquaintance, admiring what they read of his mission at Lambaréné in French Equatorial Africa, idealistically volunteered to work under him. The hospital was run on family and nature medicine lines. The family—and family goat—were admitted with the patient. All very well, but he did not permit the use of any modern aids. The basement was crammed with untouched new equipment donated from all over the world and although a well-equipped and staffed colonial hospital was nearby, he would not consult them. He insisted on his own methods, even for patients whose condition was deteriorating for want of modern nursing and splinting into fatal bedsores and contractures. All staff members, however ill the patient to whose critical care they were ministering, had to be present, at attention, to await him at mealtimes. My colleagues eventually left in deep disillusion.

I was puzzled by an extraordinary bone disease. Yaws is the most common disease of bone and joint in the African population and the problem of endemic yaws faced every medical officer in charge of African troops in West and East Africa and in the East. It is a common cause of cracked and painful feet and is said to play a part in that medical conundrum, the tropical ulcer.

The problem was complex in that the bony manifestations of yaws are so similar to those of syphilis which, in our experience rarely presents acutely. Textbook distinctions are that yaws is not a venereal disease, that it rarely attacks the viscera or central nervous system, but gives rise to recurrent attacks of pain, swelling and rheumatism in bones and joints. The chronic disease, which presents with no more than an ache or pain at night or when the limb is warm and dependent, in the long bones is associated with sclerosis and lithocystic changes, which might resemble those of Paget's disease. To keep the troops in the field it was essential that the disease be successfully diagnosed and treated.

Investigations were handicapped in that our African patients could rarely appreciate the passage of time and one was seldom given a reliable history of more than a few weeks. The African had his own brand of limited English and an investigation would go somewhat along the following lines:

'What humbug you?

'My belly/leg/foot, he humbug me.'

'He humbug you big-big or small-small?'

'He humbug me big-big.' (Never small-small.)

'How long he humbug you?

Silence. And after that no salient facts could be elicited.

Compared with any other bone disease the extraordinary feature of the acute form was the rapid development and equally rapid disappearance of bone changes. In syphilis a gummatous attack on a joint surface might not even be accompanied by muscle spasm or limitation of movement. In cases which turned out to be acute yaws the juxta-articular lesion often simulated arthritis of the joint itself with pain, tenderness, swelling, muscle spasm and limitation of movement. The roentgenograms might resemble a septic osteomyelitis with intense pain, swelling and pyrexia, although the fever is rarely high. At first many patients had been diagnosed as acute osteomyelitis or an acute malignant involvement of a bone. A number of patients had been subjected to gross surgery and even amputations. Owing to the prevalence of chronic malaria, which has similar symptoms, this type of yaws was also diagnosed as such, and treated with quinine. We suspected the lesion only when localizing signs presented themselves.

Within a few week drastic bone destruction or increases in density, or single or multiple punched out areas, might be manifested and often in the rapidly progressive type, the roentgenograms would show subperiosteal necrosis of the cortex with raising of the periosteum and the deposition of periosteal new bone, resembling an osteogenic sarcoma or the 'onion-layering' of an Ewing's tumour. Once it was realised that this was an acute form of yaws, hitherto unrecognised, and treated with arsenicals, the symptoms accompanying these swelling of joints and tendon sheathes rapidly disappear but the swellings themselves subside very slowly. In other words, the response to treatment was dramatic. Within a week or two the patient had lost his pain and recovered his sense of well-being. Tenderness disappeared soon afterwards, but the actual tumour subsided slowly. Roentgenographic evidence of consolidation of the lesion was demonstrable within six weeks.

Among the projects directed my way by the Assistant Director, Medical Services was to determine the best types of boots and shoes with which troops were to be issued for hot, menacing jungle warfare. One aspect was whether African stretcher-bearers should wear boots. In tests they were more sure-footed when barefoot. It was interesting to find that the natives, having spent their lives barefoot, have a thick pad of flesh on the soles of the feet which has the consistency of India rubber and when they tread on an uneven surface the foot adapts itself, which is unlike ours for uneven pressure causes discomfort. After studying the Africans' feet and examining soldiers' feet before and after route marches, I suggested replacing heavy army boots by specially shaped boots similar to the South African veldskoen, which have strong but pliable leather soles with tops of untanned leather. These would adapt more comfortably to the broad shape of the African foot.

When asked if I wished to do temporary duty in Takoradi in the Gold Coast, I declined. It seemed more important to complete the projects started in Freetown. I suggested we should establish an orthopaedic centre in Freetown or in Nigeria to serve the whole of West Africa, which I understood was being considered by the Higher Command, and a massage department which I had started had just opened at Wilberforce. It was still scantily equipped and staffed, but with a proud noticeboard 'Massage Department' outside, had its first four patients. Also, as Takoradi was 800 miles distant, if a more interesting job surfaced, one was likely to miss it. Further, if attached to a regiment, one might lose field perquisites, which I could not afford.

After six months I was promoted Lieutenant-Colonel and Orthopaedic Adviser to the West African Frontier Force, which entailed brief visits also to the Gold Coast and Nigeria. Those officials I encountered were very much in the tradition of the British Colonial Service. They had the interests of the indigenous population at heart and British justice was highly respected by all. The tribes had their traditional chiefs, but the Governor and the Provincial and District Officers were the princes of justice. Once I sat with a Provisional Commissioner when two tribal chiefs brought a dispute to him for arbitration. His judgement was immediately accepted by both sides—an impressive and dignified occasion.

One of the Colonial Service doctors was Jamison Carr who in his time had been houseman to Sir Robert Jones during World War I and an assistant to Harold Styles of Edinburgh as well as surgeon on the Franconia on a cruise previous to mine. Married to an American, he had lived in the States and in the south of France. Before working in Freetown as a Tropical Medicine and Hygiene expert, he had also practised in Malaya and South America. We were all impressed by his knowledge, efficiency and the way he had tackled the problem of public health in Sierra Leone. He had worked on the 'Kissi Flats', a bad swamp beyond Freetown, notorious as the happiest breeding and hunting ground of every kind of mosquito, the part of the coast which had led to the soubriquet 'white man's grave'. With World War II and the great influx of Europeans it became essential to eradicate this nuisance and Jamison Carr had done a grand and most intelligent piece of work.

One morning, the CO decided to take four of us to inspect a camp up in the mountains about 20 miles from Freetown. After the inspection, we set off with a lunch basket and bathing gear. The car had to be parked on the main road through a primitive village at the foot of the mountain. We were amused to see some naked piccanins doing a local dance to the 'music' of the tom-toms and hand-clapping of a female audience. The simple but ingenious leopard and game traps seen in the village were intriguing. We engaged a porter to carry the basket with bottles of water and beer. The thousand or so feet were an easy climb, but sweltering in the broiling heat. Shirtless, I felt as if all the pores of my sweat glands were taps turned on full, but the scenery was pleasant, in parts dense natural vegetation, in others cultivated with pineapples, bananas and highly coloured flowers. The butterflies were brilliant. When we reached the top we soon cooled down and had lunch, backed by

the glorious view. The downward journey was almost as hot as the up. We drove to the nearby shore of another village, so weathered that the sea had formed a lagoon of pure white sand beach completely surrounded by palm trees. Ignoring our costumes, we bathed nude, the first time I had done so in public, but it seemed quite the thing for men to do, so was not embarrassing. The water, soft clean sand and cool breeze were all idyllic; my only regret was being unable to share it with friends locked in England.

The only true break from the enervating effects of the tropics in Freetown was to be appointed to a recruiting party who would visit the tribes up-country. The town of Makeni, 130 miles from Freetown, served as the base from which we sallied to the various villages. Very much as in Edgar Wallace's 'Sanders of the River', we were taken to the chief sitting with his counsellors and wise men on stools along a raised dais in an open square in the village of thatched huts. The leader of the mission brought formal salutations from the King-Emperor and explained the need for young men to join his army and fight the enemy. With his elders the chief would debate this request. We were to return the next day. When we arrived, the chief and his counsellors were again in ceremonial array. After the usual courtesies a line of sturdy young men were presented as the recruits for medical examination. Those passed as fit were detailed to travel back to Freetown with us three days later.

Makeni itself was like all the villages of Sierra Leone and typical of the black tropics conical thatched roofs, compounds surrounded by palm trees and European shops and those of Syrian traders, reminiscent of the trading stores in South African dorps. Only the Provincial Commissioner, Sears and MacRoberts, the District Commissioner, the doctor and one or two of the storekeepers I met had their wives with them. The other Europeans were mostly bachelors who had been there for years. At the time their relationships with and attitudes to black women were regarded as 'lax'.

Staying at a hill station in the heart of the bush, about one and a half miles from Makeni, we made the most of the calm and peaceful up-country atmosphere, experiencing occasional perfect days without rain and with a cooler sunshine than usual. In the party were Captain Anderson of my Unit and Baron Nahum, a great photographer of society and of the ballet, author of 'Baron at the Ballet, who was then a lieutenant in the West African Frontier Force. Baron was a magnificent raconteur, especially in the Lancashire dialect. He told of a painter at work on the outside of a house when a pert maid opened a window and flicked a lot of dust over him. 'Now, my lass, says he, be careful, or Ah'll paint t'bottom for thee.' 'Fancy, says she.' 'No, not fancy, just plain, bloody red, says he.'

Our days were fairly full and busy for there were a fair number of recruits to examine, commissioners to interview, shopping expeditions and trips to surrounding villages to enquire from the local chiefs and paramount chiefs about recruits and the likelihood of recruits.

It seemed I was immune to malaria, but Baron had a severe attack which necessitated leaving him for a few days while I escorted recruits to the railhead.

One Saturday night we had a big party at which the guest was the local French trader, big, fat and viciously anti-Vichy: amusing and rather nice, and by name Chaumatemps. Of course we talked politics and he was all for England pursuing a more vigorous and ruthless policy with regard to the French colonies and other non-belligerents. He told me that the difference between the Anglophiles and Anglophobes in France then was that, whereas the former said 'we hope the English win soon,' the latter said 'we hope the bloody English win soon'. It developed into a carouse and the Frenchman became very funnily tight. He told us it was his first party in four years. The African soldiers had a song. 'Home again, home again, when shall I see my home again, when shall I see my native land, I'll

never forget my home.' We parodied this, substituting 'Chaumatemps' for 'home again' and 'native land' and whenever he became maudlin, sang this boisterously.

While in Makeni I had one horrible moment. Baron and I were walking along a grassy path to the home of the Agricultural Officer for lunch when he pulled me back sharply as I was about to step on an enormous black mamba, the most lethal snake in Africa. Again I was fortunate there was a very large bulge in its neck for it had obviously just swallowed some animal and seemed soporific, for instead of reacting at my expense, it slithered slowly off. We did not delay our own departure from the scene! It would have been sad had I succumbed to an African reptile after evading the missiles of the equally malignant Boche.

One day we reconnoitred Bombom, about twenty-two miles distant and found a most attractive village in a lovely valley. As usual, the chief, cum retinue came out to meet us. We shook hands with him and his interpreter, nodded to his counsellors and waved to the multitude of children, all fat-bellied and white teeth. All then repaired to the 'bowery' where chairs were drawn up, the women and children peering over the wall while negotiations took place. Before we left, we were presented with five chickens, six eggs and the promise of many recruits. We drove off amid screeches of 'linghai - farewell' from the assembled piccanins.

The following day, Baron went off to collect the recruits from Bombom. Anderson and I spent the morning examining and attesting such as were already at Makeni. After lunch we essayed the hill behind our station. From its summit we had the most perfect view of the wide Makeni plain, probably over twenty miles in each direction and guarded by blue ranges of distant mountains with an occasional red roof denoting a European office or habitation. On top of the hill was perched a lone, big smooth rock with a frail and ramshackle native ladder fastened to its side, so we scrambled up and sat on top, and smoked and gazed, and talked intermittently for a good hour.

The next day was one of the best since we had arrived in Sierra Leone. At 11 o'clock we walked into Makeni, bought some provisions and listened to the news at Chaumatemp's, who had a powerful radio. I was pleased to hear that we were co-operating with the Russians in Iran, but sorry about the constitutional crisis in Australia.

I had with me a small tin bath, in which one could either sit or lie. We put it on the hill in front of the house, to wallow in hot water, enjoying the magnificent scenery and a Jeffery Farnol novel all 'murrains', 'odd's boddikins' and 'gad's life, sir'. In the pre-sunset afternoon, as I lay in the bath, an elaborately equipped Ford van approached up the hill. Out stepped a well-built man in his fifties, in white shirt and shorts, white stockings and shoes and wearing a broad brimmed stiff white hat, in shape resembling those worn by the French clergy and, of course, sporting a monocle. He proved to be a charming and entertaining character, Groves by name.

After Oxford he had joined the Colonial Service in the Sudan. The years of World War I he spent with the Hussars in the Middle East. After the war he joined a firm of accountants, apparently serving with distinction. He was a member of the British economic mission who negotiated a large loan to Japan. It seems that he began to find this occupation tedious, so decided on an experiment in self-sufficiency, or 'autarchy. He bought a farm in Hampshire and within three years was producing everything he needed except for tea and sugar.

On a visit to London, crossing Piccadilly he met an old university friend, Colman (of the mustard family) who asked him what he was doing with himself, to which he replied: "What do you suggest? Colman said: "We have arranged an expedition to the heart of Africa to subvert the French. Would you like to come along? Without hesitation, Groves agreed. He assembled furniture, linen, cutlery

and crockery and a supply of books, to arrive in West Africa near the Gambia frontier where he recruited a group of African porters and scouts. From there he walked into various Vichy-controlled areas to contact the local natives and French. I gathered his mission was successful.

He had come to invite us to dinner. Our transport to Masimbu where he lived was a covered three-ton lorry driven by an African soldier. Anderson, Baron and I sat on deckchairs in the back. I had with me and was reading an old favourite 'Jurgen' and dipping into Hemingway's 'Fiesta', when, almost exactly halfway along the causeway, the vehicle slid down the embankment to capsize into a bog. We were pitched onto our sides, but fortunately not injured. It was impossible to get the lorry back onto its wheels, so there we were, with the road now impassable, night upon us, five miles from Makeni and five miles from Masimbu. We decided to walk the latter and then have Groves drive us back as far as the road block after dinner. It was not unpleasant walking through the bush by the light of our torches and the quarter light of a moon diffused through cloud. Dim silhouettes of palm trees and bush and the vague shapes of hills were all we saw. We were lucky it did not rain a drop either way, and only our mosquito boots got wet.

Because it was mosquito-proofed, Groves had taken over a girls' school as his living quarters. He was an excellent host. We could have been dining in his club in London. His three servants were dressed in white, the senior with three red stripes on the shoulder, the middle two, and the junior one.

The pace was civilised. We drank leisurely and after a serving of soup, Groves excused himself in order to prepare the omelette in the kitchen.

This was an admirable dish reverently borne in by the senior orderly, escorted by Groves. The whole dinner proceeded in like fashion, with excellent conversation on books, including those with me, and politics and the recounting of his interesting life and experiences.

From Makeni the next day, we set off in our now-righted lorry for the mountains in the north of Sierra Leone where we were to conduct another recruiting and examination of volunteers. It was the middle of the rainy season. Next to Assam, Sierra Leone has the heaviest rainfall in the world and on two afternoons this was demonstrated to us. The rain came down in torrents. Indeed, one wondered where the air had disappeared to there seemed no room for it. But we remained dry and warm in the District Commissioner's wooden house.

On the way back from the north I spent a night in the schoolhouse as Groves' guest, again enjoying a formal dinner and entertaining talk. My camp bed was made up in a spare room. In the morning Orderly No 1 shook my shoulder. "Tea is served on the veranda," he informed me in well-schooled English. On the veranda a table had been set with white cloth, a silver tea pot, milk jug, sugar bowl and cigarette box. With Groves—naturally—in a silk dressing gown and surrounded by the lush African setting, only the palm trees seemed believable.

Each officer had an African batman and mine, name Usu, was particularly faithful and the subject of envy by my colleagues. Before becoming my batman Usu had been a 'washboy' and for me, besides looking after the room, he did a daily washing. When he could not find enough worn clothes to suit him, he would rewash some of the clean clothes, so that groin-length woollen stockings rapidly shrunk into almost solid socks.

Makeni and Freetown were connected by a narrow-gauge railway just wide enough for two to sit abreast in the coaches. The journey occupied most of a day. At each stop of the journey the batmen would rush out of their compartments and run to the engine where the driver would turn on steam to fill their kettles. They would hurry back to make their 'owners' tea. In Freetown guinea corn was in

very short supply. In Makeni Chaumatemps had some 200 lb. bags on display. I bought one of these for Usu who was obviously astounded and elated by this gift. Before we left Makeni with the load of recruits, we saw him proudly demonstrating the bag to all his friends. At the stops on the journey back, he did not run straight to the engine, but instead, first deployed to the guard's van to ensure his prize was intact before dashing to the engine to fill his kettle.

In May 1942 I returned to Great Britain in the Staffordshire, a converted peacetime liner. It was on its way back from the Far East with naval and military evacuees and their wives from India and Singapore. Most were nearing retiring age, but few were more senior than commanders. I felt an element of awkwardness when they, and especially their wives, looked askance at my rank at my age. They did not realise that orthopaedic surgeons were scarce on the ground.

They were reticent about events in the wake of Japan's swift advances. Leaving so precipitately had hit them hard. As they were mostly near the end of their tours, they were doubtful about their prospects for re-employment. Also, they were upset that the Army and Navy had not put up a better show. The sinking of the 'Hood' and the 'Repulse' in one day by Japanese 'planes was a severe blow.

It was a lone voyage and although chased by submarines our speed was such that we could outstrip them. The crew were alert as we approached Britain for long range aircraft operating from Nazi occupied France were a menace. It was a relief when British 'planes of Coastal Command became our more comfortable escorts to the Clyde.

## Chapter VIII Towards Crown and Pips

On arrival in London I reported to the Medical War Office to find I was the first medical officer to return to the UK with experience of modern treatment of war-related disorders and war-time conditions in Central Africa. Rowley Bristow and Rex Diveley, Consultant to the American Forces which had now arrived in Great Britain, were particularly interested in yaws. Rex Diveley told me that the American Army was being trained to fight in the Far East where the condition was widespread. I was asked to write an urgent report on the unfamiliar acute yaws for the information of all Allied troops abroad. Instructions on diagnosis and treatment were circulated to American units and a comprehensive article was eventually published in the Journal of Bone and Joint Surgery.

My first posting was as Orthopaedic Adviser to Scottish Command where a quarter of a million soldiers were being trained for the invasions of German and Vichy-occupied North Africa and Europe. I was to visit all the military hospitals in Scotland, including impressive Edinburgh Castle, to liaise with the civilian consultants, and principally to act as O.C., Surgical Division at Drymen Military Hospital, where I was stationed.

Scotland is a spectacularly beautiful land and travel was enjoyable. I found the Scots proud and friendly, while the Highland regiments are renowned soldiers.

Drymen Castle was the peace-time home of the Duke of Montrose. The Castle itself was converted into offices, operating suites and other facilities necessary for a 600-bed hospital, with the addition of single-storey huts as wards. An earlier Duke had planted woods with examples of every known European tree, which made for an impressively attractive estate on the banks of Loch Lomond, in itself a great beauty spot. Later I learnt much by wandering through the woods, a guide to trees in my hands.

I found digs so that Nathalie could stay with me. We looked forward to seeing the beauties of Loch Lomond, but were delayed in exploring it for three weeks of solid rain after her arrival.

Living conditions in that part of Scotland were easier than in London where rationing was stricter. To cheer them up, we made a point of inviting disabled patients from the hospital to lunch. Nathalie took our ration books to the local butcher and explained this to the amiable old gentleman when asking for her exact allowance of economical meat which could be stretched with potatoes and other vegetables to make a stew. 'Dinna you worry your haid, ma girrl', he said... and presented her with a whole leg of lamb. Nervously she told him she could not take it as it exceeded her ration, but he would not brook her protest. When she reached our lodgings she immediately 'phoned me at the hospital, worried about being involved in a black market 'deal'. Apprehensively I cut her short, telling her not to advertise the fact on the telephone, until I determined the current form and customs from colleagues. Apparently in the country districts butchers did not report precisely how many cattle and sheep were slaughtered and so could be much less strict. Our stay in Scotland was made pleasanter by indulging in a more liberal table, welcomed by yours truly and many patients and friends.

Alcohol was more of a problem. I was given a half bottle of gin—a great prize. We decided to have a party. The question was, what to serve with the gin. Children were issued with bottles of rose-hip syrup, rich in Vitamin C. Mixed with gin, it made a pleasant drink. So we invited a few friends to a 'gin and hips party. The invitation intrigued them, but although their wilder expectations were not fulfilled, a good time was had by all. In Drymen, a delicious mild black beer was dispensed at the local pub. It became the 'clachan' and venue for after-work parties.

My rounds of the Command included Inverary, renowned for the weaving of splendid tweeds, redolent with the fragrance of its native heather. I stopped to choose and acquire lengths to be tailored. More than forty years later they show no sign of wear and the fragrance is still detectable.

When I reached Drymen, the talk was heavy with rumours describing the curious arrival and captivity of Rudolph Hess, Deputy Führer of Germany, second only to Hitler. Piloting the 'plane himself, Hess had landed in Scotland and had asked to be taken to the Duke of Hamilton. He wished to discuss peace between Germany and Great Britain, giving certain conditions. Within a day or two his mission was disclaimed by Hitler and German propaganda. However, it caused a stir locally. He was admitted to the Drymen Hospital under guard and although in our wards, security was so tight that I did not see him. He was transferred to the Tower of London after examination. After the war and until his recent suicide the four 'Great Powers' Britain, France, Russia and the United States took turns in guarding him in his incarceration at Spandau in Berlin.

Shortly after arrival in Scotland, the Deputy Director of Medical Services, a Liverpudlian and old acquaintance, invited me to spend several weekends at the headquarters of General Keightley's Sixth Armoured Division. General Keightley became better known later when he commanded the British and French troops in the Suez Campaign against Egypt. As his Mess he had taken over the mansion of a whisky baron, a magnificent home, splendidly furnished with walls adorned with paintings by Old Masters. At dinner the first night the General seated me on his right, which was surprising as the mess was flush with generals and brigadiers. I enjoyed the pleasant and amiable, informative dinner. However, the invitation which had seemed purely friendly, proved a serious military directive. The next morning I was again seated on Keightley's right, but after breakfast, with the DDMS, he took me to his office. The walls were covered with maps of Africa. Without more ado, at a large map of North Africa, he pointed to Casablanca, Tangiers, Oran and Tunis and said: 'We are going to invade and land here, there, there, and there. I shall arrange for a series of seminars of general interest and information about Africa for my medical officers, but I wish you to bring in the medical conditions they may encounter without reference to any particular area.'

I was unhappy to be the recipient of this sensitive and vital information. I had been a voluble contributor to discussions in the mess on the strategy and conduct of the war. Suddenly, to everyone's astonishment, I would not venture an opinion. I even dreaded that I might talk in my sleep. It was a great relief when news of the invasion was broadcast.

Responsibility for the orthopaedic care of an army subject to the traumas, sprains, strains and stresses of training and incidental sport is enormous and kept me more than occupied. I had a friendly complaint one morning that I was an unmerciful taskmaster and was chastising my staff of surgical specialists and other medical officers, 'not only with whips, but also with scorpions'. We were, nevertheless, a happy unit.

A private patient with Paget's Disease of bone was referred to me from London by Sir Thomas Fairbank, who thought my research indicated the probable answer to his problem. Mr Djanogli several times came all the way to Drymen. Of Russian origin, he had come to England with his family and had started a stocking factory at the beginning of the war.

Other than regulation, stockings were virtually unobtainable, but on each visit he brought several pairs for Nathalie. We welcomed him and he reciprocated by treating us to prime black market meals, a fair substitute for a fee. At one we were actually served fresh melon at a restaurant—an unhoard of delicacy at the time.

August the 12th, notable in Scotland for the opening of the grouse shooting season, was of even greater consequence for the Helfets. In 1943 our eldest son Anthony was born in Glasgow. We were concerned by Nathalie's physical state. Shortly after arriving in Scotland she suffered an acute streptococcal septicaemia, life-threatening at that pre-antibiotic time. Tom Davie, later Chancellor of the University of Cape Town, who had been my Professor of Pathology at Liverpool, was working on the development and production of the new wonder substance Penicillin with the Medical Research Council. I appealed to him and he sent us a rare and otherwise unobtainable early supply, laboriously grown on a jelly of revolting taste. The patient dutifully sucked squares of it four hourly. Thank goodness for Professor Davie and Penicillin; her recovery was dramatically rapid.

As her illness had been so severe, Professor Hendry, recently retired as the renowned chief of Obstetrics at the University of Glasgow, adopted her as his own patient. She would, when the time arrived, be admitted to the nursing home he favoured. His patients were reputed to suffer no pain, and so it worked out. An 8 lb. Anthony arrived without causing Nathalie more than momentary distress. I was delighted to meet my bonny son.

We were pleased to move into a charming flat, belonging to a gunsmith, in Great Western Terrace. At last we had found convenient accommodation furnished in antique good taste. Our landlord was considerate and helpful. I knew I would soon be posted overseas again, so was reassured to know I could leave Nathalie and Anthony in comfortable, relative security.

A problem was acquiring a pram, very scarce in wartime Britain. My wardmaster told me of a small shop on the far side of Glasgow. I took a bus out and made my purchase. A senior officer pushing an empty perambulator through the crowded streets proved an attention-drawing experience. However, I plucked up courage and, necessarily oblivious of the stares of my fellow officers and men, trundled it along the streets until I found a taxi.

As a hefty Anthony grew, Nathalie eschewed the cumbersome pram for bus journeys. Instead she toted him on her back, wrapped in a blanket, as tribal African women carry their babies. She caught as much attention and caused as much comment as my foray with the empty pram.

After D-Day, heavy casualties were flown direct from France to Drymen. One night, I was woken and summoned to an extremely ill patient, one of a group of prisoners of war, mostly from the German Wehrmacht, but a number of many nationalities from the "Totd labour battalions. He spoke a language no-one could identify. I walked into the long ward with the up patients standing at the foot of their beds for my entry, the bed patients sitting at attention. Halfway down the ward was an old man with a stubby black beard sitting and swaying back and forth in his agony. To me his attitude, so suggestive of a devoutly praying Jew, was an immediate identification. He had bluffed the Germans by his incomprehensible speech. He had a large appendix abscess. We took him to the theatre and after operation, to a non-POW ward. We reassigned several young patients who had been enslaved by the Nazis and who, through the army chaplains, revealed their non-Aryan identities to us.

By the middle of 1944, the war had reached a very different stage. The victories of Alamein and Stalingrad had been digested and the war in Africa had reached Tripoli where the Germans were fighting a rearguard action. I expected to be posted as orthopaedic surgeon to the invasion forces in Europe. However, as Scotland had proved to be a strenuous and tiring posting, it was decided that I would be given a break and sent to the Middle East, a base also for the Italian and Balkan Campaigns, rather than to Europe.

We sailed in a great liner through the Mediterranean to Egypt. Among the passengers was General Anderson, on his way to take command of the First Army in North Africa. He was a quiet and

thoughtful man, not at all in the Montgomery mould of a dashing commander ready for flamboyant victories, but one likely to be considerate of his manpower and conservative in his celebrations. He inspired my amateurish military confidence. Later I learnt 'Monty's' visits to units in the field were enthusiastically welcomed, but we were more impressed with the Commander in Chief, General Alexander.

We disembarked in Suez, a miserable and depressing town. As the senior officer aboard, I found myself O.C. train to Cairo. In the desert halfway there, Bedouin fired sporadically at the train. The first thing I knew was the sound of a bullet passing neatly through the compartment between me and the second in command. Such an incident is hardly believable, but the two neat holes in opposite windows were convincing.

In Cairo after the austerity of Great Britain, the first morning it was hard to believe a breakfast with three eggs, albeit small, nestling on my plate instead of the egg-a-month ration. Sheppard's Hotel and the Mohamed Ali Club must have been two of the most luxurious hostelrys in the war-time world. Glaring was the contrast between a tarboosh sporting, educated, well-cultured Egyptian, conversing fluently in several languages and the abject, ragged and illiterate fellaheen.

Many Allied uniforms were evident in the city but both soldiers and civilians appeared drab and dispirited, instead of elated or sensing victory. After all, Alamein had effectively booted the Nazis out of Africa.

Egypt and the Middle East had something for everybody. Units of the Commonwealth Forces were wide-spread. The Royal Navy had a station in Alexandria with a RAF hospital nearby. Present also were American units. There were military hospitals all over. I was the Orthopaedic Consultant to all the Allied Forces in the Middle East, with Number Three Orthopaedic Centre as my headquarters. Patients from the Commonwealth, as well as Free Greeks, Yugoslavs, etc. and POW's captured in the campaigns against the Italians and Germans, were referred for special opinions or disposal among the British and other hospitals. One felt sympathy for the expatriates and for the POW's who were cut off from their homes and did not know when they would be able to return.

Among those rescued when the Mediterranean islands were recaptured was Henry Gluckman's nephew who, while fighting in the British forces, had been taken prisoner by the Germans on the island of Rhodes. He was seriously disabled and was evacuated to Cairo. I received a cable from Henry, then Minister of Health in the Smuts wartime Cabinet and a little later Henry himself arrived to visit the South African Medical Services in the Middle East, and, of course, also saw his nephew. We enjoyed his visit.

In all, it was less strenuous than it had been in Scotland. I was expected to, and did journey to hospitals in the Canal Zone, Palestine, Syria and Jordan.

Visits to the Holy Land were moving experiences. Flying up from Cairo across the arid desert, an astonishing green line demarcated the beginning of the Jewish settlements. These were the orange groves which in the spring were in bloom so that landing at the airport in Tel Aviv one was met by a strong, pungent and very attractive aroma of orange blossom.

My reactions to the sacred ambience of Jerusalem are difficult to recount. Professor Edward Joseph, head of surgery at the Hebrew University, was a New Zealander of athletic build with impressive credentials and dedicated to the cause of a Jewish homeland. He had 'made Aliya' some years previously in order to join the University. He put me in touch with members of the Haganah, the Jewish Underground Defence Force who met secretly in the basement of his house. It was my first

acquaintance with an underground movement. I was intrigued by their set-up and with the vigorous conversation and comments. Although monitored somewhat unfairly by the British authorities, they resisted the harassment from the militant Arabs. Many Arabs wanted to live in peace with the Jews; others were incited by the Mufti of Jerusalem to attack and disrupt the Jewish settlements. The Jewish Underground were resentful of the attitudes of the British—often biased and breakaway factions such as the Irgun guerrillas sporadically demonstrated their hostility. British Military Headquarters in Jerusalem were situated in the King David Hotel on an eminence from which one could see the hills of Jordan. The following year, the Irgun, after telephoning a warning which the British disregarded, blew up a wing of offices in the Hotel with some loss of life—an action which made them unpopular, to say the least.

In Egypt, the Indian hospitals impressed me. The surgeons were diligent, keen to learn and laboured in their investigations and notetaking. When possible I would stop at an Indian hospital at lunch-time for their curries were excellent.

Of major concern were the results of surgery on joints. Many surgeons, however inexperienced, seemed to feel confident of diagnosing and operating and many wrong diagnoses and crude and rough surgery meant long periods of, and sometimes permanent disability, mainly of knees and of fractures. I made a discipline of investigation and study of inadequate practices and discrepancies which led to reports and, after the war, to publication of books on the knee, spine and foot.

In March 1945, the Director General sent me to discuss with General Orenstein, Director of Medical Services in South Africa, the transport and disposition of casualties, all of whom from the Middle East and Europe were of necessity routed through South Africa on their way to the UK, Australia and New Zealand. We flew for four days each way in daylight only over enormous inland seas and great herds of wild animals. The heat and tropical storms buffeted the 'plane and, I was horribly airsick. I suspect the D.G. had thoughtfully selected me for the mission so that I could see my parents for the first time in eight years. As events turned out, I was just in time to be at the bedside of my father who died a week after my arrival in Cape Town, but I was grateful that it was possible to be there.

An urgent cable before I left South Africa instructed me to break my journey north in Khartoum to see an acutely ill senior officer of the Sudan Government. In Khartoum I was met by an Aide-de-Camp of the Governor-General, Sir Hubert Huddleston, and taken to the Palace where I was to stay. The patient was critically ill with an obscure and, until then undiagnosed, acute septic arthritis of the hip. Without antibiotics the prognosis at that stage of the disease was distressingly hopeless and, in spite of every effort, he died a few days later.

With Europe occupied and the Mediterranean closed to sea traffic, Khartoum was the air junction between West and East and many were the VIP's who broke their journeys in Khartoum and stayed in the Palace. Sir Hubert was a delightful and erudite host, with a fund of anecdotes about the leaders of the world. Everyone met after meals in a magnificent salon with a centre table carrying an array of magazines and books. After lunch one day, I was paging through Wendell Wilkie's 'One World' which had created quite a sensation during his presidential campaign. Sir Hubert, noticing my interest, told me Winston Churchill on his way to Teheran to meet Stalin had picked up the same book to read in bed after lunch. At tea time he returned it with the remark: "This should have been called Gullible's Travels'."

Khartoum is fascinating, not only as an enormous African city and centre of learning, but also for its associations with the past. It is redolent of history. General Gordon had been killed on the steps of the Palace by the mobs of the Mahdi and was later revenged by a British expedition under Kitchener

at the Battle of Omdurman in which Churchill had taken part. The Sudan and the Mahdi have a vivid place in the colonial history of Great Britain. Sir Hubert delegated an Aide-de-Camp to show and explain the historic sites to me, including a short sail on the Nile. The Nile is an extraordinary river—a great volume of water formed by the confluence of the White and Blue Niles from the mountains of Abyssinia flowing through seemingly unending desert on either side. Arab dhows completed a romantic picture.

In May 1945 I was drafted back to England. In a way I was sorry to leave Egypt. There had been no time to visit the tombs at Luxor and other archaeological wonders, but before I left the Tutankhamen Exhibition opened in Cairo—a singularly beautiful collection.

The chief transport officer in Cairo said to me: 'Doctor, we've given you the best accommodation on the ship - you're in the bridal suite'. I was in the bridal suite which I had to share with twenty-three other officers, ranks colonel and above! But it was a happy ship.

We were all due to be demobilised. To celebrate, the officers on this Dutch liner fed us cocktails of doctored Dutch gin which were to be swallowed in one gulp and which produced the sensation of drinking a red-hot poker, and had an equally stunning effect.

This time we arrived back in Britain at Stanraer in Scotland and took train in haste to London. It was VE day and we were in time to see and hear Churchill give his rousing victory speech. An elated Whitehall was jammed.

My final posting before demobilisation was as Consulting Orthopaedic Surgeon, Western Command, based in Chester, a lovely old-world city and very pleasant area near Liverpool where we still had many friends. To our consternation we heard that both Alan Kerr and Ronald Edwards had died.

Some Britons interned in Japanese camps during the war were repatriated via Chester and many were the harrowing tales of deprivation, cruelty and starvation they related. We were moved when watching a child of five or six. We gave her two chocolate bars which she snatched and immediately ran off to hide under the mattress of her bed. Her mother told us it was a camp necessity to secrete and secure anything edible.

The war had treated me kindly, in that I had not suffered injury or illness, and no periods of real deprivation. The evidence of Nazi cruelty and atrocities which were revealed in despatches while I was stationed at G.H.Q. Cairo caused revulsion and disgust difficult to put into words.

Rowley Bristow was very much in evidence. He offered me the position of Consulting Orthopaedic Surgeon to the British Army with the rank of Brigadier, a most attractive suggestion. However, anxious to be reunited with Nathalie and Anthony, by then in South Africa, I declined. Although I have always felt more at home in the orthopaedics of the great northern centres, this consideration resigned me to continuing my career in South Africa.

The army had provided an early passage for Nathalie and Anthony to Cape Town. I was pleased when they left Great Britain with its immediate post-war stringencies and difficulties for the care of family and friends. By this time Anthony was a burly and rumbustious two-year-old, constantly on the move and difficult for Nathalie to manage on her own. There was no help for her on the ship and although some of the sailors were kind, it was a difficult voyage.

I had vetoed her taking a pushchair aboard as a) too cumbersome and b) too superior. Lo and behold, on boarding, she found herself the only mother unable to strap her toddler safely immobile into a pushchair! A practical sailor rigged up a rope harness to allow for some sort of control of Anthony

during the daytime, but it nevertheless demanded constant vigilance. They were allocated a cabin, which, although small, was for themselves. A net was strung over the lower of the two berths to prevent Anthony falling or climbing out. Mealtimes were the most difficult. The ship had a full complement of wives and toddlers of servicemen, many of whom were the results of hasty service marriages. Nathalie was aghast at how many of the cruder women entirely neglected their infants while they consorted with the crew and other demobilised servicemen. It was an unpleasant sequel to the war for her.

When it became my turn to be repatriated, I was offered the choice of waiting a week before a leisurely five or six days by flying boat to South Africa or to travel more rapidly in my *bête noire*, a Dakota. In my eagerness, I mistakenly chose the latter and so missed what I was afterwards informed was a delightful and comfortable experience. In exchange I had three days of gross discomfort. However, once arrived in Pretoria, I was taken in hand by the South African Services and by overnight train journey to Cape Town, returned to my family after six years, two months and twenty days in the British Army.

## Chapter IX Peace, Progress and Palestine Calls

A jubilant Nathalie was ensconced with Anthony in a rented seaside house at Muizenberg. A week was spent catching up, getting to know my son and enjoying true relaxation, happily distant from war. After the years of austerity, we could enjoy the fruits of peace—the rich food, superb fruit and good wine, the scenery, climate and sea bathing.

We found ourselves welcomed, indeed, sometimes overwhelmed by the kindness of friends old and new. Splendid friends George Sacks and Ariel Goldberg offered me temporary use of their well-appointed rooms. They had registered over fifty patients to await consultation with me—what an introduction! Our special Mollye Pelletier, who had shared war experiences in Britain with Nathalie, became my excellent secretary in a soon vigorous private practice.

Hamilton Bell and 'Ginger' Keen had held the orthopaedic fort in Cape Town during the war. I applied for the post of orthopaedic surgeon to the main teaching hospital, Groote Schuur, and was appointed to share the work with Bell and Keen. The appointment was honorary and, with two Outpatient Clinics, two operating sessions plus ward rounds, would occupy half the professional week. At each of these sessions I had students to teach.

Besides the hospital appointment, a research post at the university was offered. The first project was a programme to correct flat feet in children by use of heel-seats, a device later known as 'Helfet Heel-seats' and perhaps my most successful invention. Conventional practice was based on the continental method of using a moulded insole to lift the arch. However, once used, wearing insoles was a life sentence. The customary British approach had been to tilt the heel of the shoe. This positioned the wearer's foot correctly, but instead of holding the position, the foot slid down the shoe slope and distorted the leather at the heel, rendering the method ineffective.

I had always believed that the growth of a limb, including the foot, would stabilise in the position in which it was used and therefore, if a child functioned in a normal position, it would develop a normal, stable arch. By tilting the heel to the vertical, the foot adopted its normal contour and the correct arch. We developed a shaped plastic heel with a flat base which is stabilised by the child's own weight. When consistently worn in a strong shoe, the method is corrective. We learnt also that when a child walks on tip-toe, the heel automatically adopts a normal shape, so, in addition to wearing the shoes, mothers were instructed to see that when barefoot, the child tip-toed, actively holding the foot in the corrected shape, which strengthened the postural muscles at the same time. After two to three years the heel-seats and holding shoe can be discarded, with the child able to walk and run on normal feet. The South African Cripple Care Society provided funds for the initiation of this programme.

Subsequent to an article in the *Lancet*, 'A New Way of Treating Flat Feet in Children', the *London Sunday Times* ran a feature describing the heel-seat and its corrective and curative effects. The following week the editor received more than a thousand letters asking where it could be obtained—an indication of the prevalence of the disorder and the understandable concern of parents. For years afterwards, at meetings abroad, when colleagues heard the name, they would remark 'Oh, we use your heel-seats'.

Iris Michaelis, daughter of diamond magnate Max Michaelis, and Nathalie had been friends from their schooldays. Her father had made munificent benefactions, including an art gallery, to Cape Town. During the war, Iris was one of an honorary band of young ladies driving an ambulance for the British and also in France, for the French Forces. Soon after the outbreak of war, Iris presented the

RAMC with a mobile x-ray unit, which could accompany the forces in the field. She asked me to make the presentation, despite my reservations as a mere major of appearing presumptuous. However, the ceremony went off amiably and the unit was formally handed over to General MacArthur, Officer Commanding the RAMC. It would be temporarily stored at Millbank, the Headquarters in London, before being sent abroad. But tragically, early in the Blitz a bomb landed on Millbank and destroyed the unit where it stood in the courtyard. With grace, General MacArthur condoled with both Iris and me.

Her mother, also a considerable philanthropist, had established a home in Cape Town for the treatment of children with tuberculosis of bone and joint. Iris told me about the Lady Michaelis Home and intimated she would like to do something similar. She was already supporting six little cottages in Maitland, a depressed area, which was no more than a rest home for Coloured children crippled with T.B. She asked me, if I returned, would I organise the home on her behalf? When back in Cape Town, I found, in a most desolate spot, simple cottages housing 126 children, practically all of whom were suffering from some form of bone or joint tuberculosis. They were being cared for by a most admirable but untrained lady who fed and nursed them. Her work load was remarkable. The only form of orthopaedic treatment was applied through strips of striped canvas cut out of deck chairs, tied to the legs as far up as the pelvis and extended through cords over a pulley through the foot of the cot which was raised a few inches. It was a primitive and ineffective form of traction, but did cause some limitation of movement. A sizeable number of the children had discharging sinuses which she dressed. To accommodate the numbers, the cots were so close together that, in order to examine any patient, one had to move two cots before one reached the affected child,

At Groote Schuur, my registrars were Paul Michau and Teddy Sarkin. I involved them and we paid fairly regular visits. In turn, we admitted the children with sinuses or who required surgery to our wards at Groote Schuur, where we operated and, when they were fit, discharged them back to the Maitland cottages. It was realised that this was not a satisfactory state of affairs, so Mrs Waterson and Nathalie and one or two others got down to persuading local businessmen to contribute funds and in due course collected an adequate sum. Nathalie enlisted piano virtuoso Harold Rubens to give a concert in the City Hall. She and her friends were assiduous in selling tickets. That evening the Hall was packed and they collected £1200. The Provincial Authorities had always agreed to the children's care, paying an equivalent amount to that donated.

A simple, modern, streamlined hospital was built in the suburb of Newlands. The committee continued to collect funds and eventually an operating theatre was equipped, a rehabilitation centre was arranged and the Maitland Cottage Homes continued to operate as a hospital for the care of crippled children, and still does so. It is now part of the Orthopaedic Department of Groote Schuur and is the overall responsibility of the Professor of Orthopaedics. When in the 1950's the President of the American Academy of Orthopaedic Surgery toured down the length of Africa, visiting institutions for the treatment of tuberculosis, we took him round the Maitland Cottage Home. When his final report was published, he cited it as the outstanding institution he had come across in Africa.

Giafar was a famous and valuable race horse. It had run second in the Derby some years previously and now was at stud at a beautiful farm some twenty-five miles from Cape Town. Gambolling in a paddock, it fractured a leg, hardly a Workman's Compensation accident. Until then, any horse fracturing a leg was summarily shot. But this horse carried heavy insurance. Lloyds of London cabled the local veterinary surgeons to enquire whether treatment was possible. The vets called me in and accompanied me out to the farm. Giafar was a magnificent animal weighing 1500 lbs. In the literature there were accurate descriptions of equine anatomy, but we could find no report of treatment, and certainly not of method. For humans one could use a compression fixation technique

which produced rapid and successful union, allowing a patient with a fractured leg to go home quite early on crutches.

With my surgical team from the Leeuwendal Nursing Home where I hospitalised my private patients, we cleared an adequate operating area in a spacious and sweet-smelling stable. There was no possibility of operating on a table, so it was arranged to sling Giafar's three quarter ton from beams in the roof. The next morning the superbly trained nursing sisters with two experienced surgeons to assist me were installed in the stable with a full set of instruments. Along one wall were bales of freshly cut lucerne. In the eaves birds twittered. The vets administered expert intravenous anaesthetic. The horse was slung with its enormous leg across my thighs as I sat on a stool. I exposed the fracture and although the weight of the limb made it difficult, we were soon successful in reducing the fracture perfectly. Drills, chisels, the proper size of screws and plates and the apparatus to apply compression were all ready. Using an electric motor I started to drill the holes for the screws when we encountered a totally frustrating complication: unexpectedly the bone was as hard as ivory. None of the tools we had would penetrate the cortex to allow us to insert the screws.

The horse remained suspended perfectly anaesthetised, but we were twenty-five miles from the city where the needed additional instruments would have to be fetched. The vets could not continue the anaesthetic for that length of time. However much and long we tried, we could do no more. Literally with tears in our eyes we had to desist and sacrifice the animal by asking the vets to overdose the anaesthetic. A sad band returned to Cape Town. It was a bitter and badly timed lesson in equine impregnability. I hope others have since learnt from my experience.

Shortly after arriving back in Cape Town, we decided to buy a house. I called on the manager of the Standard Bank branch at which my father had run an account since the 1890's and who had supported him through periods of varying fortune. He welcomed me and told me the General Manager had asked to let him know when I arrived. The South African Head Offices of the Bank were on a higher floor of the building. I went up to be greeted by Mr Gibson, who shook my hand and said he was pleased to meet me: 'If you're anything like your father, we will be delighted to advance you as much money as you need'—definitely a promising start!

Our attorneys put in a bid at an auction for a pleasant house in Rondebosch, a leafy and attractive suburb. It was a proud moment when we walked for the first time into our own home and round our own comfortable garden. From the previous owners we bought a rather handsome wine cabinet and a bookcase, to which we added a kitchen table and chairs, beds and bedroom furnishings.

During the first year we drove to a meeting of the South African Orthopaedic Association which was held in East London where I was to present two papers. Nathalie, wishing to wear the jewellery and finery she had not touched for six years, loaded them into the car. We stopped in Port Elizabeth for dinner. While we were eating, the car was broken into and her main suitcase stolen. It was a minor disaster as the contents were not properly insured.

Friends Sid and Gertie Berman offered us the use of a home in Hermanus, a picturesque resort some eighty miles from Cape Town. We spent a relaxing three weeks of summer. While fishing from the rocks, Nathalie landed a whopping steenbras. Needless to say, my hooks caught nothing but the rocks of Africa! Later we were to spend a number of weekends at a pleasant hotel there, the 'Marine'. It was a comfortable motoring distance and when there, we could bathe, fish or climb the local mountains.

After the rigours of war, the freedom of living in beautiful surroundings and the comforts of adequate office and domestic staff meant a pleasing, indeed luxurious way of life. Anthony blossomed and in 1947 David was born, a bonny seven pounder.

After the war Nathalie had extracted a promise of 'no more wars', so it was with some surprise that I found myself with the Israelis for the War of Independence in 1948.

My father had been a fervent Zionist and had worked assiduously and generously for a university in Jerusalem. He felt it was an essential element in the structure of a Jewish state. One of his oft-expressed daydreams was that I should one day be a professor at the Hebrew University. During my youth, although I agreed heartily with the concept of the University - stemming from my academic inclinations, I had not been particularly touched by Zionism and did not feel strongly about any of the issues involved. In my wartime visits to the medical units in Palestine, I had always included the Jewish hospitals in Jerusalem. These and the meetings with Professor Joseph and his group of underground Haganah youths engendered in me a feeling for Palestine and the hard-pressed Jews which developed an emotional militancy. From that time reports from Palestine were absorbed and discussed avidly. In the post war years they were debated with the emphatic 'pros' led by my friend, Advocate, later Judge Joseph Herstein. I joined committees and became an encourager.

Now, within days of the historic decision of the United Nations on the partition of Palestine, in November 1947, while operating at the Leeuwendal I was interrupted to receive telegrams from Dr Chaim Yassky, head of Hadassah Hospital, and from Michael Comay, representing the Jewish Agency. Informing me that war with the Arabs was inevitable, they desired my urgent return to Palestine to organise and work in the Medical Services in the way I had served the Allies in the Middle East. Strongly committed, I was ready for action. With Nathalie's concurrence and encouragement - despite the promise - it was a request I could not refuse. I applied for six months leave from the University and appointed a locum for my practice.

## Chapter X Involvement- Anxieties with Action

I arrived in Palestine on the 1st April 1948, by popular superstition an inauspicious date.

In 1939, European Jewry, already stricken by Nazi policy in Germany, received another blow in the White Paper limiting their immigration into Palestine, which was administered by a British Mandatory Government. During World War II, when British civilians in Cairo and Alexandria were in doubt that the army would be able to stop Rommel, the Jewish colonists, full of admiration for the British stand against the Germans, prepared to fight on the beaches of Tel Aviv, in the streets of Jerusalem and in the hills of Judea and Galilee. David Ben Gurion, head of the Jewish Agency and later Israel's first prime-minister, dramatically declared: 'We shall fight the White Paper as if there were no war, and we shall fight the war as if there were no White Paper'.

Meanwhile, the whole Arab world was arrayed against the British, sharpening its sword and waiting only for the signal from Berlin to descend on the British remnant for a final settlement. As it might provoke the Arabs to see the Jews join up, the British Administration in Palestine decreed that Jewish recruitment should not exceed the Arab rate of enlistment, which was low indeed. Churchill had proposed creating an army of Jewish colonists. This course was not acceptable to the Cabinet, which determined the Jews to look after their own security. It led them to start the military organisations which became the instruments of survival of the infant state of Israel eight years later: the semi-legal Jewish Defence Army, the 'Haganah', the elite commando force, the 'Palmach' and the ultra-nationalists, the Irgun', with its breakaway faction, Lechi'. So ironically, these forces were the happy result of British indifference and became significant factors in the approaching war of liberation, while the Arabs noted that to be on the side of the British invited no better treatment than to be against them and were not induced to share the dangers of Britain's hour of peril.

In the immediate postwar years, Arab hostility erupted into open violence against the Jewish civilian population, leading to further British-imposed curbs on immigration, although the survivors of Hitler's Europe were now refugees desperate to reach their ancestral homeland. The Irgun and Lechi retaliated with anti-British acts of terror and intensified the headache of governing Palestine. In September 1947, the British announced their decision to terminate the Mandate and withdraw their troops, but Ernest Bevin, the Foreign Secretary, was determined to limit the nature and size of a Jewish state. He supported the Arabs, convinced they would be amenable to direction by the Foreign Office in Whitehall. Appeasing the hundred million Arabs with their resources in oil would ensure the continuity of British influence and interests in Palestine and the neighbouring countries.

In November 1947, the General Assembly of the United Nations endorsed partition of Palestine, bringing a wave of joy to the Yishuv—the Jewish settlements—to the malignant disapproval of Bevin and the Arab league.

At this stage the Arab strategy was to attack isolated settlements, the vulnerable Jewish enclaves in Jaffa, Haifa and Jerusalem, and to ambush the main roads. By attacking the roads they attempted to cut off the large cities of Jerusalem, Tel Aviv and Haifa and to interrupt essential services throughout the country. Meanwhile, the British, by repeated searches, arrests and confiscation of arms, hampered the Haganah, which had to maintain its underground character long after the Arabs had openly assembled the units of their Liberation Armies' in British Palestine. The British, in the eyes of the Jews at any rate, construed the laws of impartiality in such a way as to favour the Arabs in every manner possible. They complained that the British continued to search Jewish convoys for arms, despite the fact that convoys were being ambushed and shot up on every road in Palestine. They arrested Haganah defenders of the Jewish quarters in Jerusalem, Haifa and Tiberias and, imposing a

blockade of the seaports, refused to allow Jewish immigrants or armaments for the Yishuv to enter the country, despite the fact that hundreds of Arabs with all manner of war materials were daily crossing the land frontiers of Palestine. There was much activity by Aliya Bet, the organisation fostering illegal immigration, and great resentment when the Jewish refugees were stopped and transferred to the D.P. camps in Cyprus. In time, the British attitude induced more than bitterness. It produced the state of military thinking which remained equally pre-occupied by the threat of British intervention and by the menace of Arab invasion. Haganah emissaries were sent to Europe and the United States and spared no effort to acquire arms clandestinely.

At the beginning of April 1948 a National Council was formed in Tel Aviv. The Arabs continued their rhetoric and escalated their attacks on Jewish targets.<sup>2</sup>

Many of the surgeons from parts of Europe under Nazi domination had been prevented from working in hospitals, or at all, for years and so had missed the surgical lessons of World War II. British hospitals in Palestine also had not given facilities for work or study to local doctors. I realised consequently that, in addition to operating and consulting, it might be necessary to teach and demonstrate, and this without a knowledge of Hebrew or any continental language. Fortunately, English is practically the lingua franca of medicine. I chose suitable books and two hundredweight of surgical instruments to take with me and sounded out colleagues who might be willing to join when and if I considered the time appropriate. All, including medical auxiliaries, would be needed.

The beginning of hostilities in Palestine had aroused much enthusiasm among the Jewish community of South Africa and donations were pouring in. The Zionist Federation arranged that I travel in a chartered Dakota to Lydda, but for security reasons when flying over Egypt, scheduled 'destination London'. The first stop was Johannesburg. Nathalie and I stayed with plastic surgeon Jack Penn, who came to the airport to bid farewell. As I was leaving I turned to Jack and said: 'If I need you, will you join me?' He replied that he was not keen to take part in a war in which the front lines were undefined. The remark was hardly an encouraging start to my journey. I was uncertain of what the future might bring, but, as at the beginning of the World War, my feelings were mixed concern at leaving wife and sons, elation, a sense of adventure, compounded by a measure of trepidation.

It was not possible to fly at night. The journey to Lydda, normally four days took all of a week. The atmosphere on the 'plane was tense. My travelling companions were, in the main, Palestinians returning from abroad where they had been on business and on missions. All were pre-occupied by the precarious situation, their own prospects and anxiety about their families. The weather was rough and I was airsick every day. On what should have been the last day, we stopped to refuel at Wadi Halfa. We heard a report that a TWA 'plane landing at Lydda the previous day had been fired on by the Arabs, so were not completely surprised when the Scots pilot announced that he had engine trouble which could be repaired only in Cairo. Egypt, as well as being hostile to the establishment of the Jewish state, at the time was off-limits to foreign Jews. As we approached Cairo, the agent of the charter company came into the cabin and suggested that when questioned as to our religion, everyone should volunteer 'Church of England'. I have an admiration for the Church of England, but felt it would be rather undignified, if that is the mot juste. The time spent in Egypt during the recent war had not engendered great respect for Egyptian officialdom. On landing, we were led to a table

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<sup>2</sup> For the above passages, the erudite and beautifully written works of Abba Eban, *My People: the story of the Jews*, published by Behrman House Inc./Random House and Jon and David Kimche, *Both Sides of the Hill: Britain and the Palestine War*, published by Secker and Warburg have been a constant source of reference and I have drawn on them freely.

manned by two sloppily uniformed immigration officers who duly enquired as to our religions. I replied: 'Reform'—which was true, as far as it went. They had never heard of this religion. One looked at the other, shrugged his shoulders and waved me on.

Housed in a Cairo hotel, the party, free to come and go at will, spent three interesting days. Able to wander off by myself, a repeat visit to the Tutankhamen exhibition and to old haunts like 'Groppe's' and Sheppard's Hotel were pleasant interludes. On the third day a relatively short flight brought us to Lydda, then under control of the British Army.

On landing I was elated by the remembered aroma of orange blossom.

Awaiting me was a message from Mike Comay who had arranged to meet me but that very morning had left for Lake Success to take part in the deliberations of the United Nations. Chaim Sheba, head of the Haganah Medical Services sent a welcome and his apologies. He would see me that afternoon and meanwhile his deputy, a smart young officer would take charge.

The air of Arab menace which we had expected to pervade most of Palestine was not in evidence at Lydda airport, which was patrolled by lads from a Scottish regiment. Arab porters were active in unloading the 'plane and our luggage. The customs officials here were Jewish and Arab, with British passport officers. We were told that most of the rest of the help on the airport, such as the waiters, were really Haganah soldiers.

Lydda was surrounded and the only way to reach the Jewish enclave of Tel Aviv was by Piper Cub or by bus. I was offered the choice, but as my companions from the 'plane were all to go in the bus, I could not very well bring myself to go by air. Tel Aviv at that time was a wholly Jewish city, surrounded by Arab territory and our journey would take us through a number of their villages.

The Israelis who came to help us were all young, boys and girls for they were little more—dressed in nondescript khaki and with knitted caps. It was exhilarating being shepherded by the cheerful, confident new generation of Israelis. Later, I discovered they were Palmachniks, members of the Palmach.

We travelled to Tel Aviv in a Jewish 'armoured car', a bus shielded by home-made steel plates. At the airport exit we were stopped at a British army post. Passports were checked and we were searched for arms. Once assured that we were 'unarmed', we were waved on, escorted by two Jewish policemen ineffectively equipped with rifles, who, according to the conditions set by the British, had to ride in an open jeep—they were not permitted the protection of the 'armoured car'. As soon as we passed through the army post, the Palmachniks became very busy: the floorboards of the bus were raised and out came parts of sten-guns and hand-grenades which were rapidly assembled. The youngsters who were to protect the bus placed themselves strategically. I had anxious moments: the boy sitting next to me was playing with a hand-grenade, the clip of which he repeatedly released and then caught. He did not appear to be concentrating. It was a dangerous practice, but as they all seemed to speak only Hebrew, I could not remonstrate. Halfway to Tel Aviv, a man came round and spoke to each of the passengers in Hebrew. When he reached me, in my state of euphoria, I thought he was saying 'Welcome to the Jewish state'. I answered: "Thank you, thank you very much". My companions looked at me with astonishment and then with a smile, one translated: 'He is asking if you are Jewish! Apart from a brief rattle of bullets on the protective armour as we drove through one Arab village, the rest of the journey was uneventful.

Accommodation had been booked at the Kaete-Dan Hotel, a pleasant hostelry on the seafront of Tel Aviv. The weather was perfect and stretching my legs in the open air was a refreshing prospect. After

lunch, I walked onto the seafront where I was a lone soul. It struck me that the Jews of Tel Aviv must be imbued with the urgency of the times and working very hard for the war effort. Reality asserted itself when I heard a banging on the glass behind me and turned round to see one of the hotel waiters beckoning frantically. He pointed out that the promenade was in the line of fire of Arab snipers from a prominent mosque in Jaffa. Two days earlier a strolling Frenchman had been killed on the very spot where I was walking. It seemed wise to stay indoors.

Among the several personalities staying at the Kaete-Dan whom I met then and later was Marcus Sieff, afterwards Lord Sieff, who had been a colonel in the British Army during World War II. He was in Palestine to advise on the logistics of military transport.

That afternoon Chaim Sheba joined me and my programme was discussed and mapped. A remarkable, inspiring, though somewhat self-willed character, he was an almost daily companion for some time. He had qualified in Vienna after which, with true Zionist fervour, he had emigrated to Palestine. Settled as a village doctor and with Kupat Cholim, the workers' sick fund, he would ride on horseback to see his patients. In time he associated with the Haganah and the Palmach, but always with a vision of a medical service for the whole of Israel.

While the battles for Lydda and Ramle were raging, he called for me to accompany him to see his choice of a central hospital for Israel. We drove to Tel Litvinsky where on a hill was situated a vast deserted wartime RAF barracks. From the hill we could clearly see the scene and hear the explosions of the battle for the two towns, but Sheba had no eyes for such distractions. He was engrossed in a personal vision of his future hospital. 'It can serve all Israel. It must be adapted to accommodate facilities for research and be a venue for conferences... We can expect the medical and surgical rehabilitation wards also to achieve excellence'. And there were the shabby white walls of Tel Litvinsky, crumbling in places, with dust and dirt everywhere.

He asked me what I thought. I said: "Well, when old buildings like this were converted to hospitals in World War II, the problem was to get rid of the dust. It re-formed daily. I suggested it would be better to put up new, clean wooden army huts on the adjoining ground, which could comfortably embrace a complete hospital. But Sheba would not have this, and the foundations of the present Chaim Sheba Hospital, posthumously named in his honour, were established.

On a visit to Israel some years later, Sheba invited me to a special lunch at the hospital to show me his prize project completed. We were taken to some modern well-built and handsome extensions housing the nurses' home and special wards and I had no doubts when I congratulated and told Sheba he had been right in his original assessment. After lunch, I told Bernie Cohen 'Hagadol', the 6 foot 6 inches paediatric chief, the reasons I had given Sheba for my doubts about the feasibility of Tel Litvinsky as a hospital. He roared with laughter and said: 'I must tell you that every day in the hospital, the worst chore is clearing the dust from the wards'.

I spent time with Sheba on a number of subsequent, post-war occasions. The years did not change his austere approach to living. He remained tireless in his efforts for Israel and for his patients. He was an outstanding physician, much respected and loved by all.

My first visit after the discussion with Sheba was to a small hospital on the Yarkon River, just north of Tel Aviv where most of the Irgun wounded were being treated. It was salutary. These ultra-nationalists obviously resented an English-speaking surgeon. Lying rigidly to attention, they snapped answers to the interpreting doctor who accompanied me. To dilute the atmosphere, I asked a patient, in one of the two or three Hebrew phrases I had learnt: Ma shlomcha—how are you?" He answered in a torrent of Hebrew lasting some fifteen to twenty minutes in which he apparently

enumerated all his and his comrades' ills and pains. The process was repeated at the next bed. The pattern had been set. I realised that if I was to get any work done I would have to change tactics. That night I learnt: "Hayom ata yoter tov—today you are better" with which I greeted the same patient the next morning. He was bereft of speech. Nobody had ever made so instantaneous a diagnosis. During this period of astonished silence I made my way to the next bed.

I enjoyed subsequent visits. Imbued with a keen and confident courage these youngsters viewed their and the State's future in a heartwarming spirit, akin to that of the elite young commandos in Britain in her time of adversity in the early 1940's. Their care for each other was remarkable. Whatever the danger to themselves, they never deserted a friend who had been hit or injured. When older folks' morale flagged under desperate circumstances, theirs remained indefatigable. It established in me great admiration for their dedication.

One heroine remains etched in memory. Naomi Barkay had lost a leg while saving children during the April bombardment of Kibbutz Mishmar HaEmek by the 'Arab Liberation Army'. This riff-raff force had been assembled in Syria by Fawzi el Kaukji, a Nazi sympathiser and turncoat against many masters. The determined resistance by the kibbutzniks marked a significant turning point in the defence of the northern areas. After being wounded, Naomi had remained to encourage her friends. Sheba was particularly urgent that we visit Mishmar HaEmek soon thereafter, largely, I suspect, to encourage morale generally and pay tribute to Naomi. Her quiet, calm courage impressed me deeply. She never complained for herself, but if pressed whether anything was troubling her, just smiled.

Without a unified centre and teams organised for the treatment of casualties, and especially surgery, my work was, of necessity, fragmented—

dashing from hospital to hospital and kibbutz to kibbutz.

The day after we received reports of the battle for Haifa, Sheba and I, anxious to inspect and determine the possibilities of equipment and facilities, left Tel Aviv for the battle area. From the Arab villages along the direct coastal road Jewish traffic was still being harassed and endangered so perforce we took a roundabout route. Arriving in Haifa on the 23rd April, we found the Haganah in control with a sprinkling of Arabs content to remain in a Jewish state. There had been a massive exodus of the Arab population across the bay to Lebanon although the mayor and the Jewish forces had implored them to stay.

A useful find was a small deserted hospital in good order. A new two-pounder British gun graced the entrance and an enormous poster of the Mufti of Jerusalem dominated the main hall. Half-eaten plates of food and half-smoked cigarettes, evidence of the precipitate departure of the inmates, littered the dining hall and the bedside lockers. On the beds were Arab propaganda leaflets issued to the patients illustrated with horrible tortures which they indicated the Jews would inflict on captives and which, added to the Mufti's bloodthirsty broadcasts, induced the panic and flight.

That night, the Commander of the Haganah garrison, a South African expatriate, gave us a simple meal and showed us his defences, including an underground cavern where Arabs taken prisoner were temporarily housed. Sullen and dejected, most were sitting on the floor with their backs to the wall. Among them were a number of Nazi ex-soldiers who had joined the Arab cause. Their situation gave them reason for their dejection but they were never maltreated and showed no signs of violence. In contradistinction, I had seen Jewish bodies as well as Jews captured and then rescued

from the Arabs. Both the living and the dead had been tortured and mutilated. It was sickening and horrifying.

On the 9th of May news came of concerted attacks in the north-western Galilee in the area of Dan and Dafna by Kaukji's Irregulars. The nearest hospital was at Kfar Giladi, which was fairly central to the scenes of battle, where I would remain on duty to treat casualties. Nicholai Kirschner, previously head of the Zionist Federation in South Africa, accompanied us as far as Mayan Baruch, a settlement of South African Jews. We were in a bus armoured with steel side plates, which on the way was fired on by Arabs from the police fortress of Nebi Yush'a. The rat-tat of bullets on the armour was clear and convincing, but Nicholai would not believe that anybody would fire at him! The spirit at Mayach Baruch, where the colonists were prepared and confident they would hold against any Arab attack, was ebullient and that night was bright with Israeli song and dancing.

During my six days at Kfar Giladi we did not receive a single battle casualty. The Palmach had managed to drive the Arabs off. One morning I walked the five miles to Metulla, the northern-most tip of Jewish Palestine, where from a promontory one could overlook the beautiful green landscape which was Lebanon. It was spring and I enjoyed an unhampered stroll in the attractive countryside; past fields dotted with colourful clusters of flowers. Back in the hospital, we turned on the radio to hear a broadcast from Damascus describing the great battle and the capture of Metulla and much of the Galilee. It must have been the most serene battle of the war! Another walk was to Tel Hai where a monument recorded the valour of Joseph Trumpeldor, founder of the 'Shomrim', the Watchmen of the early days of settlement. One-armed Trumpeldor, the sole Jewish officer in the Tzarist Army, had generated a significant pioneer movement by recruiting groups from Russia. In 1920, he and seven others were killed after a heroic stand when an insurgent Arab gang overran the remote kibbutz of Tel Hai.

As all was quiet, on the 14th I decided to return to Tel Aviv. On the way, in Rosh Pinna, which was his headquarters, I met Yigal Allon, the Palmach Commander, who gave us coffee. Also present were Professor Mayer, of quiet demeanour, the scientist responsible for clearing the Huleh Valley of malaria thereby easing settlement, and David (Mickey) Marcus, the celebrated American colonel who had ignored the ban on Americans joining the Jewish forces in the war in Palestine. He brought General Staff expertise and most valuable direction and advice to Allon and the Jewish Command. He had been with Allon and the Palmach in the brilliant battles which had cleared the entrenched Arabs forces from Safed, Canaan, and completed the capture of the massive British police fortress of Nabi Yush'a in the previous ten days. A great number of modern motor cars had been taken. He told me they had more casualties from the inexperienced drivers speeding in the cars than from the fighting.

Yigal Allon, already a seasoned commander at thirty-one, had an appealing personality. Well-built and goodlooking, Yigal with his incisive manner carried an air of easy authority in spite of his youth. Concern for his men and his responsibilities was evident. He was particularly proud that in 1941 he had been commander of the first company of the first Independent Jewish army since Bar Kochba.

A number of the Israeli generals whom I met on my travels and at the Bet Adom, the Military Headquarters in Tel Aviv, became my friends. Of them all, engaging to meet the most popular with their troops were Yigal and Avraham Yoffe, the great bear of a man who, recalled from civilian occupation to high command for the successive wars, in the Six Day War led and cajoled his soldiers along the Gulf of Aqaba to surprise and capture Sharm-el-Sheikh.

In 1967 the Egyptians had not imagined it possible to negotiate the sand and hills on the Sinai coast with military transport and had not established full defensive positions. Avraham's approach was

unexpected. With relish, he later related that they found an outpost with a telephone, rang and shouted for attention—to receive an agitated voice, 'Hurry, hurry, the Israelis are coming', to which Avraham replied 'Be calm—the Israelis are here'.

Between his periods of service in the Haganah and Tzahal'— the National Army of Defence—during the early conflicts, he was deeply involved in wild life preservation, a complete contrast to his military achievements. He initiated and built the splendid Israeli nature reserves where his greatest ambition was to re-establish all the flora and species of fauna mentioned in the bible. One day during a subsequent visit to Israel I received an elated 'phone call. He was off to the airport to meet a prize pair of oryx, deviously acquired, which had travelled by a necessarily indirect route from Saudi Arabia.

Avraham was determined to preserve every stick and stone and bush and flower. He and one of his young men took us round the areas they were restoring, among them, Sharm-el-Sheikh, then the southern-most tip of Israel. A picnic of youngsters from a nearby kibbutz was just leaving. We saw one pick up a fragment of seashell. Avraham stopped the car, got out, went up to her and said: 'Please put that back exactly where you found it. If everybody took a piece of shell like that, we'd soon have nothing left at all'.

At Sharm-el-Sheikh the underwater rock formation had resulted in deepsea caverns. With snorkels one could float on the surface and look down to see the most elaborate and fantastic shoals of small fish varying in shape and colouring and moving like miniature football teams. This was being developed as a show place. The tragedy is that a short while after, it was handed back to the Egyptians and in no time depth charges were being dropped to capture the fish and the area has been devastated.

But back in 1948, this time of 'Operation Yiftach' which liberated the Upper Galilee and raised the siege of Safed was a thrilling time for Yigal Allon and for his troops, and I absorbed the atmosphere with relish. Subsequently, towards the close of the campaign, we did a tour of the conquered villages, including the ancient city of Safed. Yigal explained the strategic importance of Mount Canaan from whose heights there was a beautiful view, but it was also the central commanding height which allowed an established force to control the entire upper Galilee. In Safed, the postmaster beckoned us to come to his office where he proudly presented each with a postal cover which Safed had produced during their siege, postmarked for the day of its lifting. An interesting feature in these pre-State days was the issue of 'Provisional Stamps'—each village and town wishing to record its defiance. After the battle for Canaan and Safed, tales went round for many days about the city's miraculous salvation. We were informed by the pious Jewish elders that, as the young general Yigal was the grandson of a holy rabbi from Safed, he and his soldiers had been protected in battle by a heavenly Host.

Years later, when he was studying at Oxford, after dining together, I asked Yigal what he would like to do. His choice was to visit the fair with a shooting gallery which he had noted on his way in. We enjoyed the unusual diversion of marksmanship and, without modesty, I confess to an achievement—I beat the great military general!

Mickey Marcus was to travel to Tel Aviv that afternoon to be at the Tel Aviv Museum for Ben Gurion's declaration of the establishment of the State of Israel. He had a car and a driver and offered me a lift, which I was delighted to accept. It proved a fascinating drive. Originally from Brooklyn and a lawyer by profession, during the World War, besides being one of the military leaders in the Battle of the Ardennes, he had been adviser to President Roosevelt at the Allied Conferences with Churchill and

Stalin at Casablanca and Teheran. After the defeat of the Nazis, he had served in the United States Military Government in Germany. Of sturdy built and with an expressive face and lively mannerism, his was a strong though amiable personality. Although with a mild manner of speaking, he was obviously decided in his opinions and I judged he would suffer the failure of others badly. He spoke without reserve or arrogance and yet he had taken part in the councils of the mighty, ignoring any anti-semitism manifest in some of the American higher command of those days of war. Roosevelt had obviously treated him with special regard and included him in his immediate team for all those significant deliberations.

We lunched at one of the original Moshavim, collective villages, in the shadow of Mount Gilboa and still redolent of the spirit of Deborah—an interesting example of early Zionist settlement in Palestine. News in the Yishuv spread like wildfire. To our surprise, when we arrived in the seemingly isolated village, they all knew about Mickey Marcus and he was welcomed with the quiet fervour only country folk can accord. Speaking with our hosts revealed wariness for security, with courage and a sense of unflinching purpose. Yet there was time to discuss and take pride in the accomplishments of their small village orchestra. It was a confidence-inspiring visit. I realised that here was manifest the true indomitable spirit of Jewish endurance resulting in their survival against all the buffets of history.

After lunch we continued to Tel Aviv in time for Marcus to be present at the founding ceremony of the State. Although kept informed of his subsequent activities, I never met with him again and was aghast at the news of his tragic and unnecessary death at the hands of an unwitting Palmach guard at night near Abu Ghosh outside Jerusalem, where King David had camped before entering the Holy City. Marcus had issued an order that sentries were to demand a password. But the password was in Hebrew and he could not remember it.

A message was waiting from Golda Meir (then Meyerson) whose fractured ankle I was treating, that she wished to see me professionally. Golda was a lady of few words. Her strong personality was attractive but did not encourage trivial conversation. Her report on her clinical progress was to the point, as was her invitation to join them when, that evening, she and Nicholai Kirschner hosted a special party to celebrate the new State.

It was memorable. Twenty-four sat down to dinner at the Kaete-Dan Hotel with Golda at one end of the table and Nicholai at the other. Golda was surrounded by her 'chaverim' of the Labour Federation and the Hebrew press. We were told of her recent courageous journey to Jordan disguised in Arab dress to discuss the pressing events of the time with King Abdullah. Undoubtedly she had given nothing away and had left with his full respect. Down the rest of the table were the correspondents of British and American newspapers, including Jon Kimche, whom I was to meet again on later occasions, and a sprinkling of senior Israeli officers, including Yigal Allon and Moshe Perlman. Next to me sat a silent brooding figure, Moshe Dayan, the only one showing no signs of exhilaration. I wondered what he was meditating and was disappointed that on such a night his response was taciturn. The toasts were laced with a hubbub of elated conversation with the recurrent theme of 'after two thousand years'. It was a time for anecdotes, shared across the table and we all appreciated the journalist from the New York Herald Tribune who told a story rather derogatory to the British who were not very popular at the time. 'But', he added, 'I must tell you that some of my best friends are British'— to all present a pleasing irony.

History was made on the 14th May as the High Commissioner, Sir Alan Cunningham, a fair man of good heart, with the last of the British forces, sailed from Haifa at midnight, without fanfare, a disappointing ending to a mission of high promise - subverted by the prejudices of Bevinism.

The morning after the declaration of the State, i.e., the 15th May 1948, I was walking down Allenby Street in Tel Aviv when we were strafed by Spitfires of the Egyptian Airforce. I sheltered under the overhanging balcony of a bank. A spent bullet bounced off the road onto the pavement and on my shoe. Ironic that Spitfires which for six long years were symbols of protection and care against the Nazis, were now seeking to obliterate me! But I had the same feeling—shared by most of those around me—as during the Battle of Britain in 1940, that in spite of lack of armament and manpower, in spite of the blustering enemy propaganda and in spite of all the prophets of doom, we could not be beaten. The conviction was engendered by the attitude of the Haganah, the Palmach, Ben Gurion and the quiet resolve of the citizens. The catchword was 'Ein Breira—there is no alternative'. We could not actually assess the gravity of a concerted attack by the regular, well-equipped armies of the Arab states. Caught up in the excitement and romance of action, the possibility of defeat simply never entered my consciousness.

Two weeks after my arrival in Palestine in April, I was shocked to the core of my being by the disaster suffered by the Hadassah Hospital Hebrew University convoy. In the convoy, authorised by the British, were Dr Chaim Yassky, the director of Hadassah, and a number of most distinguished doctors, nurses and medical scientists, several of whom I knew personally. The attack and subsequent slaughter and burning of the passengers in the convoy by an Arab mob in Sheikh Jarrah on the way to Mount Scopus was observed by a number of British officers who made no move in defence or to call in reinforcements, in spite of an urgent plea by Dr Magnus, the principal of the Hebrew University. With the entire Yishuv incensed, bitterness increased towards the Mandatory Power and especially one Colonel Churchill who was the senior officer present. Grimly resentful, I could not get over that British officers had stood by without attempting to help the defenceless innocent victims.

A Passover convoy had fought its legendary way into the besieged Jerusalem, which it partially and temporarily revictualled and, within the next few weeks, the epic of Mishmar HaEmek was over, with the Jewish forces successful, thus securing the Western Galilee and Haifa, to offset the vicious attacks on outlying settlements. But the Arabs had massed for war and indeed, on the 15th May, the regular armies of five Arab countries attacked.

It was expected that the role of orthopaedic and all military surgery would, for a long time, be devoted to healing and repairing the scars of war. Planning and provision for all eventualities was urgent. Trained personnel to expand rapidly the existing medical services was not available, while lack of cohesion among these various and inadequate services caused some waste of the already limited resources.

Sheba and I immediately set to, to find furnishings and other equipment, besides medical and surgical necessities for existing units and to establish supplementary hospitals and field ambulances. These might be British or American, Italian, German or Russian. Allocations were made to each hospital and operating theatre as they were received. The surgeons available and arriving had been trained in Russian, Polish, German or British schools. Wherever one went, one found a different approach and different methods, but always an eagerness to work and to give of such skill and attention as the training of the operator permitted. It took care that my advice and directions, necessarily proffered in English, did not cause resentment to the mixed and proud recipients, who, on the contrary, showed me immediate respect and co-operation, of which I was appreciative.

We had an important bonus. The head of the potash works on the Jordan had just received the equipment and furnishings for a convalescent and restoration unit. It was still in packing cases. Prompted by personal medical care—he had fractured a leg—he was ready to part with all for the common cause.

Joan Comay, wife of Michael, was in Tel Aviv and came to my aid. She acted as my secretary, and later to the Orthopaedic Unit. Often accompanied by her two teenage children during this involvement, her helpfulness, inexhaustible energy, and knowledge of Israel and of people were invaluable. She added grace and charm, knitting any discordant stitches into the steady pattern of progress. In latter years, Joan has become the celebrated authoress of a series of popular books on the Israeli scene and Jewish history.

At the time of my arrival the battle for Jaffa was in progress and was soon over. We found an Arab private hospital, the Djani, whose owner had left for Lebanon with most of his staff. This was the first significant addition of hospital beds to our services. Two surgeons were appointed as chiefs—Ernst Spira, a Czech qualified in the Prague School of Medicine who had emigrated to Palestine before the advent of the Nazis in his country. In Palestine also, it had been difficult for foreigners to obtain hospital appointments to perform surgery. Although somewhat rusty surgically, Spira was well read and keen. He became the chief orthopaedic surgeon and a pillar of the Medical Services. The other appointee was Dr Moses, an amiable general surgeon trained in Britain with World War II experience who also established a smooth, happy general surgical unit.

The Assuta in Tel Aviv was a private hospital with beds and facilities for surgery, but autocratically ruled by a 'Herr Professor' from Germany, who 'specialised' in all branches of surgery and who regarded me with a rather distant apprehensive suspicion. After my arrival we were joined by Amnon Fried, a pleasant young orthopaedic surgeon, well-trained in Sweden, who was appointed as chief of the Beilinson Kupat Cholim Hospital outside Tel Aviv. The Kupat Cholim in Haifa had two orthopaedic beds under Dr Liffman—ridiculously inadequate for the problems on hand and expected.

Already in April, the Central Emergency Medical Committee of the Department of Health of the National Council of Jews in Palestine, in gentle fashion reciting my credentials as Chief Consultant to the British Military Headquarters in the Middle East and Adviser on the Organisation of Orthopaedic Services in Palestine during the recent world war, had appointed me Consulting Orthopaedic Surgeon to all the Medical Services with the right to enter any hospital treating casualties. The official letter of appointment remains a treasured memento: to be the first consultant to the new State was an historical milestone and of considerable elation to me.

At our disposal was a car and driver, assiduous and tireless, enabling visits to as many hospitals and casualties as possible, among them a field dressing station at Kfar Bilu where fresh casualties were coming in from an early battle for Latrun. The day was spent with the hard-working local doctors, dressing wounds and splinting limbs and was repeated whenever time allowed.

At the next meeting of the Central Emergency Medical Committee in April, I presented a first memorandum which stressed as the main necessity the immediate treatment of war wounds and the planned reconstruction and rehabilitation of all casualties. Soldiers and civilians should have the assurance of general surgery with the availability of supplementary aids such as artificial limbs. Specialists in plastic, maxillo-facial, eye and neuro-surgery and all appropriate surgical equipment were in serious demand. Additional general and orthopaedic surgeons should also be recruited. Hebrew-speaking psychiatrists experienced in war would be desirable. Maintaining morale was another priority. The Committee initially despaired of anything like a comprehensive solution. They appealed to me and after discussion on possible sources and resources, I was commissioned to implement this report.

On the 28th May, I left in a Czech 'plane in company with a dozen Israelis who were to buy armaments and aeroplanes, legally in Czechoslovakia, and wherever and however else they could be

obtained. Subsequently I encountered a legendary character in the Underground, Yehuda Arazi—hotelier, organiser of illegal immigration for the Haganah and arms smuggler extraordinaire, whose clandestine work in the acquisition of weaponry preceded and paved the way for these efforts. Others on the flight were occupied with the problems of the Jewish refugees still in European camps.

That evening we landed in Amsterdam. A night in the luxury of the Amstel Hotel was a pleasant change after the austerity of severely rationed Israel. In the B.E.A 'plane to London the next morning, I sat behind the president of the airline. Shortly after take-off, a member of the crew came up to him to announce that Smuts had been defeated. The results of the election in South Africa had been declared the previous day. A Nationalist Government, members of which had been sympathetic to the German cause during the Second World War, added a bleak tinge to the future and was a cause for concern to all of us.

In London I made a beeline for Professor Samson Wright, he whose textbook was a bible to every student of physiology. He urgently assembled his committee of the Friends of the Hebrew University, a knowledgeable, energetic and concerned group. A couple of meetings provided rich results. Dr Michelson, a leading ophthalmic surgeon, later to become professor at the Hebrew University, immediately volunteered, as did a distinguished can you believe it! —Hebrew-speaking psychiatrist, Dr E Kaplan. And that was not all. South African Dr Cyril Kaplan, a former personal assistant of mine, at that time completing his orthopaedic training in Great Britain, and several other practitioners were soon on their way, plus £25 000's worth of medical and surgical equipment.

After a week in England, I left to continue the mission in South Africa where I met a ready, and indeed eager, response. Two weeks later Dr Lionel Meltzer, who had commanded a field ambulance in the Middle East and whom the Israelis were particularly eager to recruit, Jack Wilton, a general surgeon, Louis Miller, a psychiatrist, a nurse, a pharmacist and six others, chiefly combatants—in all, a party of twelve—left with me by K.L.M. for Rome where we transferred to a chartered Dakota for the flight to Israel, reaching Haifa on the 26th June.

We had a fortuitous encounter while refuelling on the drab, deserted aerodrome in Athens, a relic of the Second World War. It was a bleak, wet evening. Two disconsolate figures huddled on a wooden bench, alone in the airport building. They proved to be Sir Leon Simon, retired Director of Telegraphs, Telephones and the Savings Bank of Great Britain and Mr Norman Bentwich, K.C., from London who had been invited as consultants to the new State of Israel. The pilot of their T.W.A. flight had decided not to land at Lydda and had dumped them in Athens. It was a pleasurable moment when I said: 'Can I give you a lift?'

We arrived in Haifa without visas. No documents were completed or filed. The Israeli officer who met us caused amusement by announcing that anyone who came with Dr Helfet was welcome.

## Chapter XI Exhilaration- Israel Survives

During the intervening month, the battles of the Haganah to clear the road to Jerusalem past Latrun had been fought, with the Israeli forces suffering grievous casualties. Jerusalem was under siege and the only manner of access was by twin-seater Piper Cub for which a narrow levelled strip made landing possible. Golda Meir had been one of the first to make the hazardous journey.

Each morning I packed a small bag and reported to the Bet Adom—"The Red House"—Military Headquarters, ready to respond to the urgent request from some desperate battle area or troubled kibbutz demanding priority. Most of the pleas were for ammunition or a Davidka—the Israeli-devised heavy mortar cannon. The Davidka bomb could cause local devastation, but a major effect was from the enormous noise caused by its blast. I was told that many Arabs, hearing it, were convinced the Jews had an atomic bomb. In fact, this had been a factor in panicking the Arabs of Safed.

The beleaguered fighters were also calling for medical assistance. Each morning there was a message in urgent terms requesting my presence in Jerusalem. I was most concerned at what was reported about the casualties, including the sorry state which my good friend Harry Joffe was suffering, but there was never a chance of my being the solitary passenger on the daily 'plane.

The 'air force' was minuscule: when the five Arab armies equipped with the newest armaments invaded on the 15th May, there were eleven single-engined light civilian aircraft requisitioned from their owners available to the Israelis. As there were no bomb racks on the Piper Cubs, the pilots dropped small bombs or noisy stones in tins as spoof bombs over the side as they passed over the Arab lines.

Introduced to me at the Kaete-Dan had been Terry Farnfield, whom I got to know quite well while advising him about certain of his arrangements. An ex-RAF pilot, his long, bristling ginger moustache, coupled with an outgoing and ebullient nature, made him noticeable. A South African Jewish girlfriend had introduced him to the cause of Israel and his sense of adventure had led him to evolve an elaborate scheme in that cause. Under cover of filming a war movie in one of the Home Counties in England, he had acquired a number of redundant Beaufighters which were surreptitiously fitted with extra tanks. One afternoon, in the middle of organised filming, with recruited associates he set off on the clandestine journey via Corsica to Israel. This contribution to the 'air force' was invaluable. The 'planes were serviced and soon in action. A number of colourful characters were among the volunteers arriving in Israel to fight. Among them was a tall, stout, strutting South American of fierce appearance, accoutred in bandoliers with two revolvers stuck in his belt, by name Pataki. However, I heard of no exploit of his in subsequent battle reports.

One morning I was asked if I would escort Lorna Wingate to Rechovot to spend the day with Mrs Vera Weizmann, wife of the first President of Israel. This was an unusually pleasant assignment and I spent a fascinating day. Mrs Weizmann was a gracious and well-informed lady, while to the Israelis, Lorna Wingate, besides being the widow of the illustrious Orde Wingate, was glamorous on her own account. The Wingates were intimate friends of the Weizmanns, with whom they often stayed. Moshe Sharett was also a great friend. Like her late husband, Lorna loved and was fascinated by the biblical new state and had travelled to Palestine as soon as hostilities started to see what help she could give. She brought her young son with her from Scotland to school in Israel so that he could absorb the spirit of the people. She had already enlisted my help for Dr Eric Simon who was starting a rehabilitation unit near Caesaria. Lorna was articulate and interesting and gave an unabridged recounting of how she met her Orde, of their enthusiastic interest in Palestine and in Egypt. She was quite lyrical as she described her first and subsequent visits to Burg-el-Arab, a palace in the middle of

the Egyptian desert built by Englishman Jennings-Bramly with love and passion. She described walls rising twenty feet high out of the flat silver desert, part castle and part Italian villa and containing an Aladdin's cave of inexhaustible delight and surprise. After Lorna's arrival in the Middle East she and Orde stayed there several times, and indeed, Jennings-Bramly wanted Wingate to give up the army and be adopted as an 'eldest son' of the palace. However, he elected to remain with the army and his Zionism. Orde Wingate has his place in history, and Lorna gave me a picture of the man behind the history.

In complete contrast to the elegance at Rechovot was a visit to Paula Ben Gurion. I was driven to a simple house in a suburb of Tel Aviv with a solitary Israeli guard at the door. Dumpy and motherly, the lady greeted me with warm effusiveness. Her aches and pains had obviously been with her for some time. She described them to me as only a trained nursing sister could. She was a pleasant patient, but sometimes, when she related at length her medical experiences in Milwaukee, it was difficult to remain at ease.

I had been pressing the authorities to allocate suitable beds and facilities for our unit. One weekend the Minister of Health, Dr Katznelson, drove with me to a small hotel in the Galilee to see Ben Gurion who was ostensibly having a brief rest. I had been introduced in the Bet Adom and had met him on subsequent occasions. He was a small, dynamic man, his hair, as in his photographs, dishevelled and on end.

He had heard of our work and endeavours. After I had related our problem, but before I could list our needs, words tumbled out of him. He turned to the Minister with a series of crisp directives. We were to be allocated a floor and all facilities for surgery in the beautiful new Rambam Hospital. Situated on the beach in Haifa, it had been designed by Eric Mendelsohn, the architect also responsible for the Hadassah Hospital. We were in business! I enjoyed our dramatic interview. Although he had questioned me while I treated Paula, this was the first time his decisive mind was in evidence, even if this could hardly be deemed a profound military decision.

Later, from the Tel Aviv beach I watched briefly the 'Altalena incident'. Although Ben Gurion was nominal overall commander of the forces, up to this stage there was, in fact, no unified leadership of the several armed factions. Fears had been growing that the right wing Irgun would turn their separately acquired arms on the Haganah and take control of the Government. When a major shipment of Irgun arms was to be landed from the ship 'Altalena', Ben Gurion with a show of strength forced the Irgun to surrender and resign their separate command. Observing and hearing the firing between shore and ship, at first we had no idea what was happening and were appalled when we realised that this was between Jews, but Ben Gurion's handling of the Irgun was decisive in unifying the Israeli Defence Forces. I was very much in the Ben Gurion 'camp', no doubt influenced by the fact that most of my friends at the Bet Adom were unquestionably his adherents. At the same time I was wary of Irgun intentions. Years later, when he was Israeli Ambassador in South Africa, Eliahu Lankin, commander of the 'Altalena', in a discussion with me dismissed the possibility of a coup, but I was not convinced by his exposition of events. Perhaps my prejudices persist.

During a brief truce with the Arabs, the Israelis completed an alternative route to Jerusalem, a difficult road across the hills from the lower plain. From it, Arab-held Latrun straddling and commanding the old road could not be seen, but gunfire was audible. Jack Wilton and I travelled on the second convoy. It was a memorable, indeed, unforgettable experience. We travelled standing on the back of a farm truck, holding on to the railings. The road was at least six inches deep in dust and so, soon, were we; and although the larger rocks had been removed, it remained very uneven. However, the emotional anticipation of the relief of Jerusalem minimised all discomforts which led

Jack, with unfailing good humour, to remark that the 'Burma Road' should now be called the 'Jerusalem Road'. Later, in honour of Mickey, it was renamed the Marcus Road.

A heavy ridge still obstructed the way. The convoy stopped, everyone dismounted to carry the baggage and boxes from the bulldozed road over the top of the hill to the motley transports waiting on the track which had been cleared from the Jerusalem end. This track was easier and we made good time into the outskirts of the city where, instead of the expected greeting and universal welcome on this Sabbath eve, we ran into a demonstration of dismayed and resentful citizens who objected to our travelling on 'Shabbat'—religious fervour led them to ignore the pangs of hunger and other miseries of the siege. Yet later, we came across other religiously observant young men on duty in outposts such as the Notre Dame Hospice draped incongruously with Tallith—prayershawls—round their shoulders, Uzi under one arm and a prayer book under the other, acquitting themselves nobly in the arts of war.

The courage of the soldiers and civilians was beyond praise. Water was in short supply and rationed, and, to add to the disagreeable discomforts, the toilets could not be flushed so the city gave a malodorous welcome. The daily shelling by the Arab Legion rendered its toll. Some of the worst casualties were housed in the basements of the Notre Dame and in Hadassah 'Gimel'—'G', the old British military hospital where Dr Seideman, a British-trained Israeli orthopaedic surgeon, had done splendid work during the siege.

We started work immediately. Some patients in poor condition had been treated by a middle-aged but influential surgeon from a rabbinic background. He had taken simple fractures, requiring no more than a closed reduction and plaster-of-Paris, or a Thomas's splint, but, knife-happy, had performed open operations under those infective conditions. The result was gross sepsis in a number of patients, which, in the circumstances, was almost impossible to cure, resulting in chronic sinuses and very ill patients.

These examples of rash surgery, in ill-equipped conditions, were the only legitimate criticism, for the grossly overworked and overstrained doctors and medical staff had applied single-minded devotion. Considering the lack of water, medicine, splints and other aids we take for granted, the results were remarkable. Because of the limitations in experience mentioned earlier, the volunteers who had served in the British Army, including Doctors Sheba and Seideman, Moses and Jebin, who had been with Wingate in Abyssinia, were among the few au fait with the newest developments in casualty treatment and sufficiently experienced in their practical application. Doctors Weismann from France and Fried from Sweden must also be mentioned, while in the Galilee Dr Goldmann, a South African orthopaedic surgeon had laboured valiantly among the casualties from the Degania-Tiberias area. I felt chastened that I should criticise, but determined that an imperative would be to arrange one or more courses on recent advances in surgery.

During my stay in Jerusalem, and subsequently, I came into contact with and to know faculty members of the University and staff of Hadassah Hospital, including more than a sprinkling of international stars. The calibre of the leading academics at the Hebrew University and Hadassah was impressive. Professor Rachmelevich was a brilliant physician and Professor Mayer a leader in tropical medicine and malaria control.

The surgeon Professor Joseph, my wartime introduction to the Underground, with a most likeable personality, was as popular with his students as he was with his colleagues in the Haganah.

Of international fame on the faculty was Professor Saul Adler, whom I had also met during my visits in World War II and to whom I was already devoted. He was a selfless, remarkable scientist who had

been concerned in the original discovery and subsequent treatment of Leishmaniasis. His memory was encyclopaedic and erudition profound. In my book he was the complete scientist, the complete clinician, the complete human being ... and the complete absent-minded professor. Stories about him abound, recounted with glee by his ardent followers— although he claimed most of them were apocryphal. I was told the day hostilities ceased after victory in Jerusalem, the Adler family who had been living in cramped quarters were to move to a house in Katamon, a more salubrious suburb. Saul had not had time to inspect it and that day walked from his laboratory, not realising he did not know the exact location of the new house. He saw a young boy playing in the street and called him over. 'My boy, can you tell me where Professor Adler lives?' The boy looked up in astonishment and pointed to the house: 'Over there, Daddy'.

Years later, when he stayed with us in Cape Town, he was to deliver a lecture at the University. That afternoon Nathalie did everything to prepare him for the formal evening, running his bath and laying out his evening suit. Just before we were due to leave Saul burst out of his bedroom. 'Nathalie, Nathalie—you see how unnecessary is all your fussing!'—he was back in his sports jacket and flannels.

Unfortunately, two brilliant specialists—in radiology and in cancer research were among those who perished in the massacre of the Mount Scopus convoy.

After my interview with Ben Gurion and the allocation of beds in the Rambam Hospital, we settled in to busy and necessary work. A university friend from my Liverpool days, Harry Beilin and his wife Judy, a charming couple, had settled in Haifa during the Mandate. As representatives of the Jewish Agency they had reached an easy and useful relationship with the British Army and the Mandatory Power authorities in Haifa. Their headquarters were in the Zion Hotel which served as the consulate and was much frequented by British officers and visitors. General Cunningham and his staff said farewell from this 'consulate' when they sailed on the 14th May. The Beilins were kind and counselled helpfully when we were setting up the medical facilities at the Rambam and Italian hospitals.

The Italian Hospital in the town was designated for reception of patients and for medical and pre-operative care. When fit for operation they were transferred to the Rambam, which had been built by the Mandatory Government, an elaborate hospital and fitted with air-conditioning! Alas, because of the austerity conditions, the air conditioning was inoperable. As the windows could not be opened, when the intense heat of the Israeli summer fell upon the unprepared, sweating newcomers, the attire of the staff became skimpier and skimpier. The sea was always warm, but at the end of a hot day in the wards or operating theatre, it was pleasant and refreshing to dive in, even if one could seldom cool or stay cool afterwards. The sea with waves at Nahariya was better.

With the creation of the State, groups of South Africans, medical men, nurses and auxiliaries arrived and were assembled in Haifa. A lovable character was Dr Harry Berelowitz, son of a rabbi, a superb anaesthetist, then about sixty. He had been determined to come to the Holy Land, and once there, in a state of euphoria, expressed every thought with quotes in biblical Hebrew. He had an inherent fear of catching cold and although the weather was warm when he arrived, he was wearing an overcoat, jacket, cardigan, and thick woollen underwear. But working in the hospital in Haifa, as it became hotter and hotter, each day he discarded another layer. First went the cardigan, then the jacket and then gradually the underwear. He finished off with a pair of Bermuda length shorts held up by braces. One morning he was in a theatre gown and, as did we all, left it open at the back. To administer each anaesthetic his hands were occupied, one holding the mask on the patient's face, the other holding the ether drop bottle, so, when his braces slipped, the conscientious Harry would

not risk the patient in the cause of modesty and could not stop his shorts sliding down to his ankles. He stood firm—uncovered but unabashed. I realised something was amiss when I noticed the nurses making unnecessary but amused rounds of the back of the table.

Harry arrived early in July, in company with George Sacks, the celebrated senior surgeon who had been so helpful when I returned to Cape Town in 1945, Jack Penn, my plastic surgeon friend from Johannesburg and several others, including Dr Penn's two Afrikaans theatre sisters, Benedict and Roux, who did a magnificent job and added efficiency and quality to the organisation. They soon answered to 'Bracha' and 'Ruth'. Within two hours of their arrival they looked across the bay at the outline of Acre and asked: Is that ours?

The next morning, with Sheba and a full car, we travelled to the Galilee where we were to leave Jack Wilton and Harry Berelowitz to deal with a number of patients at the Tiberias Hospital. Travelling on the long straight road out Haifa, an air raid warning sounded. At that point the road was flanked by deep ditches filled with dry, breast-high, vicious-looking thistles. George had not experienced an air raid before and was uncertain about what to do. Sheba said: 'You must all jump into the ditch'. We all looked down at the inhospitable thorny reception area and George expressed the feelings of all when he said: 'I'll take my chances with the air raid. We visited Dr Goldmann and his patients in Poriya and drove beside the Sea of Galilee and then to Degania, the original kibbutz, where we examined more patients before returning to Haifa.

My team, now known as the 'South African Unit' spent some five days a week at the Rambam and Italian Hospitals in Haifa. Most week-ends we paid visits to consult with the doctors in charge of patients at other centres— in turn to the Galilee, the Negev, Tel Aviv and Jerusalem. By the 1st September, Cyril Kaplan and I had performed 630 orthopaedic operations. George Sacks and Jack Wilton, the general surgeons, achieved like numbers, while Jack Penn worked mainly in Tel Aviv. We examined patients everywhere. I stayed in the Lev HaCarmel Hotel and most evenings, on returning from the hospital, would find patients waiting outside, including parents with children who had suffered in the polio epidemics.

In mid-July Nathalie arrived from South Africa. In these early days we were very short of plaster, bandages, various splints and other basic medical supplies. Each morning she would take a list and visit different pharmacies and other institutions to collect all she could find for the day, utilising the funds provided by the South African Zionist Federation.

Abba Khoushy was a remarkable individual on excellent terms with both Arab and Jew. He had fractured his ankle in the battle for Haifa: as a patient he became a good friend. He provided Nathalie with a car and English-speaking driver for her supply expeditions.

One morning Abba 'phoned me to come to his office as he had something interesting to show. I walked in to be met by Abba, on his crutches, and Ben Dunkelman, a towering Canadian, who had distinguished himself as an officer in World War II and now commanded the Israeli forces in Central Galilee. With them were two large and impressive Druze Arabs in traditional dress and sporting fierce moustaches, each accoutred with belts holding a pair of heavy revolvers. Abba explained the Druze were sympathetic to Israel and had come to discuss with him and Ben the coming battle for Nazareth. Under discussion was the integration of tactics to be used to defeat the attacking Syrians. It was an amiable occasion. We drank small cups of Turkish coffee and ate watermelons. A few days later Dunkelman and his forces captured Nazareth and, with Haifa and Acre already in Jewish hands, secured the Galilee up to Rosh Hanikra on the Lebanese frontier. Israel had successfully dented the Arab positions!

The campaign in Central Galilee and the capture of Nazareth were achieved fairly rapidly. We had a sense of personal involvement for Jack Wilton's brother-in-law, David Susman from Cape Town had been wounded and required treatment in Haifa. The next morning we left in a convoy to inspect the medical facilities in Nazareth. This proved uneventful and we had the odd sense of being tourists. However, except for a brief view of 'Mary's Well', there was no time for such indulgences. We lunched at an Arab restaurant in the town for an excellent meal with meat— quite rare in those days in Israel, but Nazareth had not been rationed. At the next table, in obviously cheerful mood, sat Yitzchak Sadeh, a luxuriously bearded officer, founder of the Palmach and, with Wingate, of the successful Special Night Squads.

Nathalie was asked to find accommodation for the newly arriving South African doctors and nurses. Abba Khoushy referred her to Yakov Salamon, a senior Israeli advocate, custodian of captured or deserted Arab property. He made available two fine Arab houses on condition that Nathalie and her friends made a meticulous list of all the contents and cupboarded and locked all valuables. These were interesting, with silver and gold plates and other valuable ornaments but rather garish furniture. Everything was carefully stored and eventually handed back intact. The houses made comfortable quarters and the doctors and nurses were soon active and usefully employed.

A suitable convalescent centre was initiated at Nahariya, a pleasant village and beach resort north of Haifa. When possible, a late afternoon jaunt to see the patients, few of whom at that stage required further active treatment, would allow us to fit in a swim. A bonus was the fig tree on a small deserted roadside Arab farm, which gave us a rare taste of ripe fruit.

One of the South African kibbutzniks at Mayan Baruch, Ray Lieser, a pianist, was a hero of the war and a morale tonic. He lost his sight and both hands in a mine explosion. With a ready smile, he insisted on doing everything possible for himself. In hospital he was soon strumming on the piano with two sticks tied to his forearms. Later he left for the United States for special training. When last I heard, he had married his Israeli nurse and was playing the piano in a night club.

During my sojourn in Haifa, several young doctors spent time with me for instruction in modern orthopaedics and the treatment of casualties. Men such as Spira, Fried, Isador Alkalay and Myer Makin went on to develop their own units and establish the excellence of Israeli orthopaedics. Makin became professor at Hadassah, Fried led orthopaedics in Kupat Cholim the Labour Federation medical service while Spira continued his work at Tel Hashomer, Sheba's dream hospital at Tel Litvinsky, and Alkalay built up his unit in Nahariya from which he still operates.

On my visits to Palestine in 1944 and 1945, I had been sounded as to whether I would be interested in the Chair of Orthopaedics at the Hebrew University. The same approach was made to Professor Carl Hirsch of Stockholm University in Sweden. We each knew of the duplicated offer but both felt that the Hebrew University was not yet ready for a chair of orthopaedics. From time to time, while in Haifa, I received messages to visit the University in Jerusalem with the enquiry, would I be interested in discussing the renewed proposal.

One weekend after Nathalie arrived and was settled, we went up to Jerusalem. We stayed near the wall separating the old city from Israeli Jerusalem, at the Eden Hotel, still under rather limited circumstances and short of water. On the Saturday morning we decided to go for a walk so that Nathalie could enjoy her first view of Jerusalem. All was absolutely silent and the large open space near the YMCA and King David Hotel seemed peaceful. We attributed this to the Sabbath and were impressed that no one was working. Walking across an open area toward the imposing YMCA building, we were astonished and intrigued to see an Israeli soldier walking half-crouched towards

us. He shouted and approached rapidly. He told us to crouch as well: we were in good view of the Arab sentries patrolling the wall and a number of Israelis and innocent visitors had become casualties from snipers. This was the second time I had been in the sights of Arab snipers—and this time with Nathalie! Thoroughly chastened we crept to the YMCA. We had been very fortunate.

At several sessions of discussions, a definite offer was now made that I return to Jerusalem to serve as orthopaedic chief at Hadassah and take the orthopaedic lead at the Hebrew University. As soon as the latter was ready to grant academic titles, I would be offered the Chair.

After the disaster of the Mount Scopus convoy and the death of Dr Yassky an English doctor, Eli Davis had taken over as head of Hadassah. At the discussions, Davis was joined by Professor Fekete, acting Principal of the University and Professors Adler and Joseph, among others who did their best to persuade me to accept. My impression was that they were idealists with unbounded faith in the tremendous long-term future of the University, but I soon realised that Davis spoke with limited authority. He was tentative and nervous and would not commit himself to any positive action. I raised the questions of departmental budgets and professional and clerical staffing. Davis' response was that 'Professor So-and-So had been at the University since the beginning of time and did not have a budget of any significance, let alone a secretary'. Davis' attitude and reaction were dismaying, but what really disturbed me was to be told that the Chief of Physiotherapy would, as a right, take over every patient once I had operated, which obviously was ridiculous because how could one treat patients without following up with aftercare. The other seniors present all pleaded with me to come and to have confidence in future arrangements. They said I should not worry and that everything could be sorted out hardly a satisfactory arrangement, however. Resolving problems would have the added complication of committee discussion in Hebrew. I doubted that Israelis would accept any change without profound argument in which I would be at a tremendous disadvantage.

Inclined as I was to link my fate to the University, I left the meetings most undecided. Emotionally I was enthusiastic about the new State and impressed with the quality of those I met and their confidence in the future and of the part they were prepared to play. Also, my father's dream of me working at the Hebrew University was a consideration that stirred me. I felt that here I could be challenged and stimulated to new ideas. But there were heavily negative aspects. The welfare of my family was paramount. Nathalie would be without the service and help to which she was now accustomed. The education system was radically different from that of the British system in which we had grown up. With a growing family could I, at my stage, give up my burgeoning practice and current research to join the eager band, with a long wait before enjoying the fruits of the dislocation? And there was always the language difficulty.

It was decided that the question would be left open for a year or more, until my next visit to Israel. When that time came, we felt the move was too impractical.

One very hot weekend afternoon Sheba asked me to join a meeting in Jaffa. He would not tell me what it was all about. He was with an Israeli businessman who was in charge of supplies for the medical services, together with two men who made artificial limbs. Served coffee by an old lady clad in sombre black, we conferred in a quiet courtyard under a shady tree, presumably out of earshot of all but the angels. I had some experience of manufacturing limbs during the World War when a factory was set up in Alexandria, staffed by very willing Italian prisoners of war, but producing a heavy, mainly wooden and clumsy construction. Meanwhile at Roehampton in Britain, the Hangar factory had developed and was manufacturing a light and efficient limb, also used by the Americans. Two of those present had a financial interest in providing what I called the 'Middle East limb', it being similar to the Alexandria product, and were all for starting a factory locally to manufacture this

cumbersome contrivance. I made a strong plea in perhaps too-forcible language that we should send suitable amputees for training by Hangars, and import an expert to instruct Israeli amputees in measuring and assembling. When the precise and accurate parts were acquired from Britain, in collaboration with Hangars, Israel would be enabled to manufacture and fit artificial limbs of highest quality, which could be developed as an industry for Israel and, indeed, for the Middle East and adjoining Mediterranean countries. Sheba wished to encourage the 'Middle East limbs' and the meeting broke up with me stubbornly differing from the others.

Quite unknown to me the amputees has set up a committee of five, each representing a different district. A few days later, after a session at the Rambam Hospital, Julian Goth, chairman of the amputees' committee, a bright young man who had lost a leg, approached me. To my astonishment, he knew every detail of what had been said at the Jaffa meeting. His committee, who strongly agreed with my arguments, had decided on the Hangar limb and wished me to support an appeal to Ben Gurion. I did so. As a result, Ben Gurion commissioned his aide Sasha Goldberg to negotiate with Hangars. Israel obtained its factory manned by amputees trained in Britain and still makes, fits and supplies these limbs.

It was the only time that Sheba and I differed seriously. I did not realise quite how much, because for a time he was very cool in his relations with me. However, when I left to return home, he brought his twelve year old son to say goodbye. The boy was shy, but in a few charmingly rehearsed words of thanks, bade me well and presented me with the attractive insignia brooch of the Haganah Medical Service.

Two suggestions of mine did not achieve popularity. When the Israeli authorities were considering a decoration for bravery, I proposed the 'Order of Israel' as its acronym Oy Oy might be appropriate for the Wailing Wall. My 'Wandering Jew', to rival the 'Flying Dutchman' for the new Israeli airline also met only with mirth. With the atmosphere of breaking new ground everything was a stimulant to the imagination. A burning question was 'should officers be ranked', a hot debating point among the socialist young. Eventually this was settled by Ben Gurion who insisted that good discipline required distinctive ranks and smart uniforms.

During this 'licking into shape', Ben Gurion requested the senior officers to Hebraicise their names. In translation, names such as 'Landfisch' became 'Dagon'. I asked my cousin in the Classics Department of the Hebrew University if he would determine the translation for 'Helfet'. He 'phoned some weeks later to say it was medieval Slavic for an agricultural implement, a term which did not distinguish between rake or spade!

When hostilities subsided during a truce, typical Israeli humour sprouted. A constant source was the varying communities of Jews from all over the world—at the expense of the Teutonic habits of the 'Yeckers', the contrasting slapdash approach of the Jews from Eastern Europe or the exotic and solemn Yemenites.

During this entire period, the atmosphere in Israel was permeated with a selfless idealism—indomitable and undaunted. Miracles were not only possible, but probable. In spite of the terrible trials and losses, there was an awareness that history of biblical quality was being made. The bearing of all ranks at a memorial service for the fallen, on Mount Herzl, was impressive and moving. It was a privilege to be invited to attend.

In September, after six months we had to leave. Count Bernadotte was assassinated. All travel from Israel for civilians was totally restricted. My friends in the services decided that Nathalie and I should have priority. We were given passage on an American cargo 'plane which made its first stop on

Cyprus. In the airport there we were given a meal before setting off for Switzerland. The 'plane was unheated and crossing the Alps was very cold indeed. There were no seats and we all sat on a strip of canvas stretched around the side of the cabin. In the middle was the cargo—to our amazement, and, if we weren't so cold, our amusement—palm branches and citrus used for the festival of Succoth.

We landed in Geneva on a cold, crisp, sunny morning and were taken to a pleasant lakeside hotel where, after a bath, a luxurious Swiss breakfast with eggs and crisp rolls and real butter and pots of coffee was served. After the stringencies of Israel, every mouthful was a treat. The next afternoon we took train for Villa d'Este on Lake Como in Italy where we luxuriated for five days before leaving for South Africa.

The six months of hardships and heartaches, of anxiety about casualties, always tempered by underlying certainty of our ultimate triumph, had flown. It had been exhilarating and exciting, an experience for which I have been ever-grateful. I was pleased too that Nathalie had been with me for the last six weeks and had also developed a love for Israel and its people.

Some years later the Israeli Minister to South Africa did me the honour of presenting me with the 'Oth Kommemiuth'—the Medal of the Foundation of the State. Every three years until 1961, I spent a month in Israel visiting each orthopaedic centre, and joining in discussions with the rapidly expanding, increasingly prestigious Israel Orthopaedic Association, which now holds its place internationally. I cherish the welcome status of a Foundation and Honorary Member.

Those who participated in the establishment of the State enjoy with me the memories of shared experiences, of valued friendships, and of a service we will never regret. We only wish it had been in our power to do more.

## Chapter XII Rich Relationships and Researches

The return to Cape Town heralded our settling to enjoy the pleasures of a growing family. After my early peripatetic experience, cossetting my children was a keen pleasure. Anthony at five and David just over a year were both sturdy specimens. In 1949 we welcomed Timothy, and in 1952 Tessa. Both were born prematurely, by caesarean section. As 'prems', they each weighed about 3 lbs. and were initially a cause for worry. No babies' milk bank functioned in Cape Town at that time. Through our doctors, we arranged to send a driver and car on a daily collection round from new mothers who could spare an ounce or two. Both Timothy and Tessa flourished on this regimen, indeed, at one stage gaining weight more quickly than directly fed babies.

Maurice Nellen, as a student in London after my marriage to Nathalie, was one of the South Africans visiting our flat in University Street, talking over experiences and plans. In Cape Town, he introduced us to his brother and sister-in-law, Len and Stella Shawzin. Unusually gifted, Len was a delightful companion and an extraordinarily kind and wise man, seeming to enrich everyone with whom he associated. His devotion to his family, on whose least behalf no concern was too much, especially impressed me. Held in the highest esteem by the leading business figures in South Africa, he was then busy initiating an empire of retail shops selling fashionable ladies' wear, not only nationally, but also in Britain. Stella is an artist of merit. Originally a painter, she switched to sculpture in which she has achieved considerable renown, holding exhibitions locally as well as in Britain and the United States. She has done the Helfets proud by painting both Anthony as a child, and myself in a doctor's coat. The Shawzins were among our closest friends. We took long walks together, while weekends in Hermanus with them were the happiest of occasions.

They had a charming home, called 'Acorns', in the Fernwood Estate in Newlands, a white, thatched house with a front gable in the Dutch model, at the upper end of two acres of a garden as beautiful as any in South Africa. Situated on the early slopes leading up to the majestic rear peak of Table Mountain, with a gentle stream down one side and a row of impressive oaks on the other, it was fronted by a small herb garden and a couple of imposing elms. Below the house stretched a lawn, big enough for children's games and beyond that a tennis court. In between grew an orchard of plum, peach and apple trees, with enough room for a large variety of berries. On the south perimeter grew part of the three hundred year old almond hedge which the first Dutch Governor, Van Riebeeck, had planted to keep off marauding Hottentot tribesmen. We fell in love with this home and could not believe our ears when Len came to tell us that he and Stella had bought a farm in Constantia. He knew we loved 'Acorns' and if we wished, could buy it for the same price as he had paid. This was in 1950. We really could not afford it, but after a sleepless night determined to swallow all doubts and buy it. We never regretted the decision.

We enjoyed eleven halcyon years there; in fact, when we left for America, our biggest sacrifice was to sell 'Acorns'. There we watched our children's early steps as they ranged from toddling to running and then to climbing. Whenever possible we would walk out onto the slopes of Table Mountain. Tessa was determined to keep up with the boys. To our amazement, at the age of five she showed her mettle by climbing the 3500 feet to the top of the mountain. Nathalie flourished in the garden which she revered and embellished.

The children all enjoyed happy and untrammelled schooldays. The boys attended a government primary school in Rondebosch. When the older two reached high school age, we elected to send them to the excellent private boarding schools at Grahamstown, in the Eastern Cape, Anthony to

Kingswood College and David to St Andrews. Tessa started at the reputable girls' school of Herschel, in the nearby suburb of Kenilworth.

Our domestic staff—cook, maid and driver—all adopted us. Newton, the driver, would ferry the children every day during the school term and was always available for me in my work and for Nathalie in her manifold activities. His shining black face would light up when with the children. His own were divided between Cape Town and Rhodesia, now Zimbabwe, where he bought a plot of land and after we left South Africa, started farming, and from what I hear, successfully. Had the Government laws not become more stringent, he would have continued to live in the Cape. However, a recent letter told me his eldest daughter has become a school teacher and the other children are doing well. They are a pleasant, happy family.

During these years of the late 1940s and 1950s South African society started to experience the upheavals inflicted on it by a doctrinaire Nationalist Government, intent on imposing 'Apartheid'. Although their disabilities have been extreme, not only Blacks have suffered.

A major difference and a serious symptom of the illness which has beset South Africa was the mandatory separation in Government schools according to the home language of the scholar, either English or Afrikaans. In the country villages this meant that English-speaking parents who did not agree were forced to the expense of sending their children to a boarding school in one of the larger towns or cities. To my astonishment, I discovered that English was taught in the Afrikaans schools as if it were a foreign language, yet both English and Afrikaans are the official languages of the country. When some children of poorer rural background attempted English, the result was often so hesitant as to be incomprehensible—and the next generation may be even more isolated from the rest of the world than their parents. It was also a significant factor in the depopulation of the country areas—another of South Africa's ills.

Separation of the coloured races is the major stumbling block. Inherent prejudice limits easy association. In the country districts some Whites who attempt to cross the colour bar may be shunned and boycotted by their fellows. This may be double-edged, for with the upward mobility of the 'coloured' and black people, they begin to reply in kind, hurting white business by retaliatory boycotts and by limiting their contributions of labour. The question is, has South Africa time to cure its own ills?

Meanwhile, my work was unworried, with patients of interest, not only from the Western Cape, but from all over South Africa and some from abroad. Among the latter were two specials, Colonel Alf Katzin and Yehudi Menuhin.

In my experience, Alf was a notable. A man of my own vintage, in his early days in Cape Town he enjoyed life in a satisfactory business and in leisure, as a keen horseman. At the outbreak of war he joined the army as a private and was soon promoted sergeant in a line regiment with which he was sent to East Africa and Abyssinia. By the time he reached Egypt, he was commissioned. There his exceptional qualities were recognised and he was seconded to the British Army where he received rapid promotion.

At the battle of El Alamein he was on General Wilson's staff as a full colonel. When the United Nations Relief and Rehabilitation Administration was organised by New York Mayor La Guardia, he requested Alf's transfer, to be appointed his undersecretary. Subsequently Alf was transferred with equal rank to the United Nations Secretariat. His career continued to blossom with a striking culmination after the Suez Crisis in 1956. The canal had been blocked by sunken ships and it was urgent to restore the waterway. The Americans who had come into the picture by then appointed

General Wheeler, an engineer, to take charge. Alf was to be the organising genius. What was remarkable was that Alf, although Jewish, was sought by the Egyptians for this leading role. Under Nasser, they were extremely sensitive about Jews in general, and the Israelis who had just achieved a remarkable victory, in particular. It was a feather in his cap that neutral and Third World countries for a long time beat a path to his door, seeking his distinguished counsel on various commissions and international organisations.

I had met Alf in the Middle East, but briefly, before he was transferred to UNRRA, so hardly knew him before I received a request to see him as a patient. He had been involved in an aeroplane accident in East Africa and had injured his neck, leaving an ununited cervical fracture, which caused him considerable and almost constant pain and disability. He had been referred to various pundits who apparently failed to make a diagnosis or suggest treatment except for a cumbersome collar. Eventually he consulted me. The case history suggested a most unusual osteoid osteoma in one of the fracture fragments, borne out by clinical examination and careful x-rays. At the Leeuwendal Nursing Home I excised the small tumour, and fused the joint. The sudden loss of constant pain delighted us all.

Medicine is the catalyst in many lasting friendships. In Alf I found marvellous fellowship and unlimited friendship which I have treasured life-long. My relationship with him has been fraught with considerable interest and many unusual experiences. He has a great sense of humour, his letters are gems and to be with him is a constant entertainment. I met no one of his friends who did not value their association with him and who would not exert themselves for him and at his request for his friends, a virtue from which I profited mightily.

His sister was famous as 'Sagittarius' of The Economist. Her husband was the well-known British actor, Hugh Miller, who lunched me at the Savage Club on the Carlton Terrace, fascinating for its walls decorated with paintings, drawings, cartoons, poems, criticisms and other memorabilia of the elite of Britain's world of art and letters, including Bernard Shaw. When later I was in Washington, Alf arranged for me to meet and be entertained by General Wheeler, who took me to the Army and Navy Club with the walls of the enormous dining room embellished with the monster heads of American moose. General Wheeler was a most interesting man and I was delighted to be entertained so royally.

In 1956, Yehudi Menuhin came to South Africa on a concert tour. Suffering severe discomfort from his back and pain in the leg, he had consulted a number of leading orthopaedic and neuro-surgeons in both Britain and the United States. However, it seemed there had been a hesitancy amongst my senior colleagues to make a diagnosis and to treat the famous violinist. An urgent message was received that he was arriving by sea the next morning, crippled with pain. I examined him on board ship and was amazed that his condition had not been firmly diagnosed and treated as he was patently suffering from an acute prolapsed lumbar intervertebral disc. I explained the problem and advised him it was necessary to operate and remove the disc which was compressing one of his spinal nerves. He had a concert scheduled for that evening and was determined to give it. I went to watch as he played in obvious pain, with his back supported. Immediately after, he asked me to go ahead with the operation. His friends and advisers in America and Britain sent a flurry of cables, urging him not to risk surgery by a relatively unknown doctor, and in the 'wilds' of South Africa. But Yehudi seemed to have full confidence and he was determined that I should operate. Two days later, I did. The operation proved quite simple. I removed a large disc as gently as I could and was delighted when next day he was out of pain and resting comfortably. Three days later he was up and starting his yoga exercises and postures. A few weeks of rest was prescribed, of which he spent a week in the nursing home and then, with his family and mine, we went to the seaside in Hermanus for a relaxing

holiday. Yehudi told me afterwards that he travelled so much that this was the longest period in years that he was able to sleep in the same bed.

The following year I visited Europe while he was on holiday at his home in Gstaad in Switzerland. He invited me to stay and I spent a delightful few days. The second day was his son Gerard's sixth birthday. Yehudi had bought him a scaled down violin and after breakfast proceeded to give the small boy, eager to emulate his father, his first lesson, a most touching incident.

Gstaad is dominated by a round-topped mountain, the Engel'. Knowing my fondness for mountain climbing, Yehudi announced the next morning that we would climb it. It was an extremely hot day and by the time we reached the top I was sweating profusely. Yehudi, helped by his yoga, was at comparative ease and, as we approached the very summit, strolled ahead, stood on his head and looked up at me: 'Can you do this? It was an effective demonstration of the success of the operation and of my lack of yoga!

However, he had told me that whenever he had to stand for a long time, he was worried by backache, particularly towards the end of a performance. Two days later he was to give a concert in London. By coincidence I was to be there at the same time. Yehudi arranged for me to be fetched to the Festival Hall. It was fortunate that I was able to watch him playing for it became possible to pinpoint the reason for his discomfort: his posture in standing with the violin placed a constant strain on his back. During the interval I was taken to see him in the green room. He embraced me and then looked enquiringly for my solution to his problem. I was able to demonstrate and advise him on his posture and once this was corrected his pain was relieved. A lesson or two, the proper exercises and his problems were solved. He was delighted with his easy passage and for years afterwards, if any friends or colleagues suffered from backache, he would 'phone me for advice or direct them to see me.

It was for similar reasons that, while in the States, I was taken by Leo Mayer to see Isaac Stern briefly. The famous ballerina Alicia Markova was no longer dancing solos herself, but was teaching in the ballet school in New York when she fell and injured a knee and I was fortunately able to help her. In Cape Town, concert pianist Harold Rubens injured a muscle in a very muscular arm, which proved a more difficult problem to correct. I benefited from the friendship of these great artists.

Nicholas Monsarrat, author of 'The Cruel Sea' and other bestsellers, the finest of which were about the navy in which he had served during World War II, spent some time in Cape Town, where we met. When his wife, also a writer, had a period of illness there, I was approached to treat her, during which time I had several conversations with Nicholas. Before the war his father had been a leading honorary surgeon at the Royal Northern Hospital in Liverpool and, for a time, my teacher. I mentioned this, but was taken aback when, although with a smile, he told me that he had been known as the son of a famous father, but now his father was known as the progenitor of a famous son!

In total contrast, a patient of note referred to me while on a visit to Cape Town, was Simon Marks, Chairman of Marks and Spencer. I was fascinated by his personality. His modesty in view of his achievements was remarkable. Intriguing is the biography, written by Marcus Sieff, of Israeli acquaintance, in which are described the Marks and Sieff family history, from humble beginnings after arriving in London from Eastern Europe, and the saga of the incredible burgeoning of Marks and Spencer.

Rewarding friendships were maintained with English colleagues of yore, among them Karl Nissen of the Royal National Orthopaedic Hospital in London. He had a main interest in osteoarthritis and his

correspondence on this subject was enlightening. Sadly, his wife suffered chronic illness and Karl's travels and efforts were circumscribed by the time spent at her bedside.

Firm friends were Guy Pulvertaft and his wife Betty. After the war Guy was senior surgeon in Derby and became a world authority on surgery of the hand. He was one of the most rigidly correct and admirable colleagues of my acquaintance.

Bobby Burns, on the staff of St George's Hospital in London, was also a celebrated orthopaedic surgeon. His wife was the daughter of Bernard Berenson, the notable art critic and their splendid home in Great Windsor Park, engrossing to visit, housed a magnificent art collection.

During the mid-1950's, the College of Physicians and Surgeons of South Africa (later the College of Medicine) was founded, encouraged by Sir Reginald Watson-Jones and Sir Harry Platt, as he now was. By happy fortune H.P. was President of the Royal College of Surgeons when, with representatives of sister colleges in the Commonwealth and in the United States, he was invited to observe our first examinations for the FCS (SA). At the accompanying ceremonies, I was privileged to compose and read the citation for the award of an Honorary Fellowship, the FCS (SA), for his contributions to orthopaedic surgery and for the esteem in which he was held internationally.

During this visit to South Africa an amusing interlude, which might have had tragic consequences, led to the creation of the 'Rhino Club'. It was the practice of the orthopaedic surgeons in Natal, under the leadership of Jocelyn Hill and Graham Bickerton, to take visitors to the Hluhluwe Game Park in Zululand, home of the white rhinoceros, an animal almost as grey as the ordinary African rhino. These are mastodons, weighing as much as four tons as against the black rhino's mere three and a half.

That particular Sunday we travelled in two cars. The cognoscenti informed us that the black rhinos were aggressive while the white rhinos were quiet and pacific. They are very short-sighted but have a keen sense of smell. It was an interesting and enjoyable excursion. The car in which H.P. was travelling developed a puncture and stopped. Everyone got out to stroll around. Some fifty or more yards away, a lone rhino covered in grey mud as were all the other animals, was calmly grazing. We were assured it was a white rhino. It took no notice of us but then the wind must have changed. As the visitors were sniffed it stared suspiciously and started to pound the earth and to charge the car a grotesque and fearsome sight. Fortunately the puncture had been mended and everyone scrambled for the car, with, I am certain, H.P. setting a world record for a man with a gammy leg getting back into it.

Safely settled in the restaurant that evening, as the recounting of the incident was embroidered and became more and more hilarious, it was decided to found the 'Rhino Club'. The qualification for membership was to be an orthopaedic surgeon who, while a guest in the Hluhluwe Game Park, had been charged by a rhino. On more mature reflection it was realised that membership might be limited to H.P. as Founder, Rhino No. 1, so the rule was relaxed and now orthopaedic guests who have visited the Park are elected. Club lunches are held at national meetings and usually at the British and South African Orthopaedic Associations and SICOT, where Sir Harry's founding adventure is celebrated.

The Club in its time has included some hundred and twenty members from South Africa and most of the English-speaking world, as well as countries in Europe. In 1985 the first three 'Calf Rhinos', sons of members, were elected, including my son David. The Club's motto is a smug MAJORES NO HA (there is not better').

Another most memorable venture in the wilds of Africa was a trip Nathalie and I made to the tremendous Gorongosa Game Reserve in Mozambique. Utterly unspoilt, it made the South African Kruger National Park seem tame, even commercialised. Its thousands of square miles teemed with great herds of graceful zebras, impala, wildebeest and buffalo galloping across the wide spaces. We were fortunate to encounter a pride of nine regal lions. Accommodation was in austere cement bungalows, spotlessly kept, with adequate bathroom facilities including showers. The chicken barbecued in the open by a solemn chef had a piquancy lent as much by our enjoyment as by its peri-peri spice.

Academically, I felt refreshed, my mind active with ideas thronging for expression. Over the years some hundred contributions have been slipped into days and evenings of pleasant endeavour. Several papers followed my wartime work on feet, besides the early researches on flat feet in children.

In 1954, three patients in succession presented with acute pain and tenderness over a sesamoid bone under the metatarsal of the great toe. The standard treatment was to excise the sesamoid, which rarely resolved the condition. I know of two famous cricketers who, after removal of the sesamoid, had to give up fast bowling as they could no longer slap the foot down at the moment of delivering the ball, as seems necessary. At the first operation, I noticed that the digital nerve to the border of the great toe crossed the lateral sesamoid and the long flexor tendon. At the crossing, the nerve was embedded in scar, and both nerve and scar were adherent to the tendon sheath. Instead of removing the sesamoid, it appeared reasonable to free the nerve from adhesions and to excise the scarred portion of the tendon sheath. The longitudinal incision in the line of the tendon healed perfectly and the patient suffered no subsequent discomfort. Sensation on the medial surface of the toe also recovered.

A similarly successful result followed the same treatment for the other two patients. As some loss of movement follows removal of the sesamoid and as it would seem that scarring round the nerve is responsible for the pain, neurolysis is probably all that is required. Since my advocacy of the technique, this operation has been in use.

Speculation on pain and disabilities of the knee joint was productive. Minor rotational deformities in the knee joint are a primary cause of pain. In time a minor deformity erodes the opposite surface of the patella, with consequent increasing limitation of full movement. Repeated friction during weight-bearing causes discomfort, minimal at first, but slowly increasing in intensity until it is a constant symptom of what is known as osteoarthritis of the knee. I found that, in the early stages, rotation while extending the knee relieved this symptom. This gentle, simple manipulation, plus quadriceps drill with the patient maintaining movement, would reduce pain and actually restore comfort for some time. But eventually, usually a minor strain or stumble would reactivate the limitation and pattern of symptoms. These phenomena led to a realisation that the knee is not a hinge, but that its movements are part of a helix, or screw, and from this came the awareness that movements of most joints, both weight-bearing and non-weightbearing, have a helical component. It led to a series of papers and lectures in which I demonstrated and stressed the helical character of first the knee joint and later other joints, with the importance of restoring full helical movement rather than hinged movement, to relieve pain and disability.

Besides several papers on this thesis, it became the basis of eventual major works on the knee, including 'Internal Derangements of the Knee' and 'Disorders of the Knee'. A series of invitations to discuss and demonstrate these findings resulted, the most rewarding of which were eventual annual lectures at the American Academy of Orthopaedic Surgeons. In these and subsequent visits to

different centres in the United States, Great Britain and Portugal, I developed a definitive discussion on the mechanics of the knee joint and the consequences of failure of rotation.

I was given the opportunity to perform and describe the first spinal osteotomy for ankylosing spondylitis in South Africa.<sup>3</sup> The patient came from Upington, a remote town on the Orange River. The fixed curvature of his spine was so pronounced that when sitting upright, the top of his head was at a right angle to his thighs. The osteotomy was satisfactory. Care was taken to ensure a happy medium for the extent of the correction: the patient was left with a slight stoop so that he could see the road at his feet and his plate at meals. In cases such as this, the removal of the wedge of spine should not interfere with the arc of vision. Post-operatively, a light malleable brace was fitted.

Investigations of diseases of the spine, including Paget's, continued. I discovered and described the condition of slipping or displacement of the cartilaginous end plate, which simulated prolapse of a lumbar intervertebral disc. Fusion of the slip cured the condition.

Practising in Cape Town at this time was Carl Coplans, a most able practitioner of Physical Medicine, with whom I tackled many problems of the spine. With Carl, I described the mechanisms of scoliosis and the use of a spring brace in its correction. For the patients we treated, Walter Phillips performed any necessary thoracic surgery; I handled the spinal aspects. This research, however, was rapidly overtaken by brilliant comprehensive spinal fusion in a number of orthopaedic centres.

Also with Carl, I had an idea for a torsion spring insole, which would accomplish dynamically what we had been able to do so passively and by the patient's weight with the heel seats. Although we got as far as establishing accurate drawings, we never produced or tested any models.

It was during this period that I gave my first lectures and published papers on coracoid transplant for recurring dislocation of the shoulder. The dislocation is due to the gap left by detachment of the glenoid labrum, a ligamentous structure in the shoulder, with or without deformation of the head of the humerus bone. These defects predispose to repeated dislocation, for there is nothing to stop the head of the humerus from slipping out of the shallow glenoid fossa, a pouch in the joint lining. Numerous operations to repair the defect had been described, of which those by Putti-Platt and Osmond Clarke and the Johannesburg 'stapling' operation were the most popular.

I devised a simpler operation whereby a bone block was created from the tip of the coracoid process which was attached to the neck of the scapula at the edge of the shoulder joint. My first report encompassed thirty consecutive patients, with only one recurrence, and that due to a subsequent accident.

Quite interesting was the development of a new treatment for ununited fractures of the scaphoid of the wrist. This work later formed the subject of my first lecture to the Albert Einstein College of Medicine.

For the 1959 edition, Henry Cohen, editor of the British Encyclopaedia of Medical Practice, invited a contribution for the volume on 'Medical Progress'. In his editorial comments, he labelled my survey of orthopaedic surgery as 'a refreshing outlook'. It included sections on common symptoms of pain in the arm, low backache and sciatica as well as many of the orthopaedic problems of old age.

All in all, these researches and writings were stimulating, enjoyable and rewarding.

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<sup>3</sup> This operation was devised by Smith-Peterson, M.N. et al and described in the Journal of Bone & Joint Surgery, 27-1

## Chapter XIII Betwixt and Between

In May 1958, as President of the South African Orthopaedic Association, I paid a first visit to Washington DC, leading the South African delegation to the second of the six-yearly Combined Meetings of the Orthopaedic Associations of the English-speaking World. Our American hosts showered us with kindness and hospitality. Each day was marked by some ceremony at which the visitors were feted.

Our delegation was well-received, but I was surprised to be elected to reply to the Bishop of Washington's speech of welcome at a crowded opening function. Somewhat nervous, I prefaced my response by remarking that I had not been in the United States long enough to advise Americans on how to live, but suggested that if they were affluent, they should live in America and holiday in South Africa; if not so wealthy, however, they should live in South Africa and holiday in the United States! After an initial start of surprise, this tweak at my hosts was received with smiles and chuckles and has been requoted to me on a number of occasions.

At the Congress banquet, George Eaton, President of the American Association, made a speech to which I also responded, pointing out that the first orthopaedists were American witch-doctors who prognosed and treated maladies by 'throwing the bones' - the bones being mainly the tail of a small deer. I had brought with me a witch-doctor's brightly beaded stick, which I then presented to him. He later reported that he had tried to use it, but unsuccessfully!

At a session on the first day, I was in the chair when several men with whom I had been associated, including Ronald Furlong and Scottie Law, presented their papers. It was fun to share a quip or two with them.

Arthur Steindler was the revered doyen of the celebrated Department of Orthopaedics at the University of Oklahoma, which has spawned a number of leading teachers of orthopaedic surgery. I was astonished when after one of the sessions, the grand old man himself called me out and sat me down to have a chat. He asked about my background and the work I was doing. He had heard of some of it and discussed and elaborated his own ideas on related topics—a revealing and most enjoyable talk. After my return to Cape Town a complete set of the books he had authored, masterly treatises on orthopaedics, arrived at my home, each with a charming inscription wishing me well, a treasured addition to my library.

An impressive occasion was the official visit to the Senate Foreign Relations Committee at the Capitol. The Chairman was the celebrated Senator Theodore Green, then ninety-one years old, but very much 'all there'. Although reputedly hard of hearing, he briskly fielded and responded to the invited questions.

Placed directly opposite the Senator midway along the table, I was seated in the chair normally occupied by a principal visitor. After a number of run-of-the-mill queries from members of the delegations came my turn. It was the time of 'Sputnik' and space exploration was much to the fore. I posed: 'Has the Committee addressed the subject of the laws to operate in space? Suddenly Senator Green's deafness became severe, a most diplomatic affliction! He turned enquiringly to his aides and after consultation answered that the Committee was very concerned about the question, but confessed that, as yet, they had no answers.

After the five days of the Combined Meeting, twenty guests chosen from the delegates were invited to tour the leading orthopaedic institutions along the eastern seaboard of the United States, notably the George Washington in Washington itself, Johns Hopkins in Baltimore, the Du Pont Institute in

Wilmington, the University Hospital in Philadelphia, the Massachusetts General in Boston and in New York, the University Hospital, the Hospital for Special Surgery and the Hospital for Joint Diseases.

The tour lasted five days and in each of these institutions an interesting session was arranged for our benefit and as a showcase for the hospital itself. It was magnificent! The presenters were men whose names were bywords in orthopaedics. At each stop we were invited to comment and to question, and they replied in kind. I must have expressed interest forcibly, for while I did notice at times on the tour that I was being quizzed about my work, it did not strike me as purposive until, in both Philadelphia and New York, I was sounded gently as to whether I had any interest in moving to the States.

The Department of Biochemistry of the University of Philadelphia was an eye-opener. Knowing of my interests, they demonstrated their new biochemical computers. A solution would be poured in at one end and from the other would emerge a complete breakdown of the constituents whereas at Thomas' before the war, I would hand my young lady a solution on the Monday morning and on Thursday she would produce a qualitative and quantitative analysis. Here, in minutes, a more complete answer was obtained. The print-outs of calcium and phosphorus and the acid-base figures were of major interest. My part in the discussion after this demonstration was avid, for I was intrigued and saw the possibilities for my own researches.

The Du Pont Institute in Wilmington was a superb example of the wealth of resources backing American orthopaedics. Endowed by the Du Pont family, the beautiful buildings housed a medical centre for the treatment of major orthopaedic problems in children, not only from America, but also from abroad. I could not get over the whole, spacious institute holding only forty beds, but with lavishly well-equipped laboratories and research space. The staff quarters where we were entertained to a magnificent repast were luxurious.

Later on the tour we visited New York University Hospital. As we approached the multi-storied buildings, recollecting Wilmington, someone in awe remarked: I should think they must have at least fifty beds! In South Africa, we were used to teaching hospitals housing hundreds of in-patients and handling thousands of out-patients weekly. In Britain too, space was rather cramped. Many scientists produced outstanding original contributions from hole-in-the-corner laboratories.

While in Baltimore, as the South African member I attended an editorial meeting of the International Board of the Journal of Bone and Joint Surgery. The venerable Dr Johnson chaired the meeting at which Norman Capener represented the British Board and George Eaton the American. Watson-Jones, the British Editor and originator of the combined Boards, had made stimulating proposals. We had amiable discussion and finalised productive resolutions on the present and future of the Journal.

The dramatic appearance of Sputnik had stimulated a competitive urge in all sciences—if such were needed—with many scientists recruited to the United States and with generous funding. We could sense unsuppressed excitement everywhere and the talks and suggestions fevered my imagination. The visit to the Washington congress, besides the interest of the proceedings and affording the opportunity of meeting contemporary leaders in orthopaedics, led to great changes in my life and career.

In London during the return journey from Washington, Leo Davidoff, eminent neuro-surgeon and Clinical Dean of the Faculty of Medicine of the Albert Einstein College of Medicine at Yeshiva University of New York, 'phoned and met me. He invited me to accept the Chair of Orthopaedics at Einstein. He gave me a stimulating account of the college and its future and was obviously eager that I should join the Faculty. The picture he painted was most attractive.

In the euphoria of my visit and tour in the United States I was receptive to the idea. Although very busy clinically and enjoying my work in Cape Town, the offer was most tempting. Academically, the profusion of top quality scientists we had met and the wealth of facilities in the United States and which were offered me at the Einstein were dazzling. I had always respected, and still do, the level of clinical competence in Cape Town, but here was a fresh horizon. When I returned home, quite overpowered by the possibilities, we faced the obviously major, major decision. Moving from the almost idyllic existence in Cape Town, the unknown prospects of life in New York, however exciting, made this a step to be approached very thoughtfully.

It was suggested that Nathalie and I should pay a short visit to New York when we would be able to assess the whole set-up. We flew from South Africa in December 1959. Travelling by the shortest route involved a sixteen hour non-stop flight from Johannesburg to New York. We arrived at a city deep in snow. New York displayed a rare beauty in its white blanket. Tracks had been made in the snow but we did not realise that each of the hillocks on either side of the main highway covered an automobile.

Leo Davidoff and Leo Mayer were to be chief protagonists for me. Leo Mayer met us at Idlewild Airport. He was a terrible driver and the trip from the airport on the slippery roads was a hair-raising experience. We counted ourselves lucky to arrive safely. We stayed with him in his comfortable apartment on the West Side where we were entertained with the best of comfort and cuisine.

The Faculty had invited me to lecture by way of assessing me. I talked about fractures of the carpal scaphoid, for which I had an original treatment, viz. arthrodesing the scaphoid to the surrounding carpal bones. This gave a stable, painless wrist with good function. After the operation the patient lost only some 20% of flexion, thus solving a vexing orthopaedic problem. The alternative was to expose the joints and screw the adjacent bones together, a procedure which carried the operative and post-operative problems associated with putting metal into moving parts. From the amiable atmosphere after the lecture I gathered that my talk must have pleased at least some of the people for some of the time.

To practise in New York required a state licence, and I was told I would have to write the state examinations. This seemed ridiculous: they had invited me to teach for the same examinations they now expected me to write! I discussed the matter with Einstein's Dean, Marcus Kogel, who was a power in the medical world, with a great reputation for his role in the Medical Services in World War II. He contacted the authorities to be told the examination would be a formality: the examiners would do no more than skim my papers— but, according to the rules, I would have to write. An appointment was made for me to see the Secretary of the State Board, in the capital Albany. He reiterated the official line. He had not previously known, and was surprised to hear that in Britain, the qualifications and seniority of the applicant were considered, and if invited to teach, his licence was automatically endorsed. I stated I would refuse to come to New York if I were not licensed without examination, adding I should feel foolish in minor subjects which had not been relevant to my field. He replied that in the years since World War II, they had endorsed the licences of only six foreign graduates without examination. When asked who they were, he told me that five were Nobel Prize winners. But, to my pleased surprise the sixth had been my opposite number in general surgery at St Thomas'. His expertise was in artery replacement, which I considered of no greater distinction than mine. I said to the Secretary: 'Well if you licensed him without examination, you should not have any difficulty licensing me.' He then asked for my curriculum vitae and after reading it, agreed: 'Oh no, we ought not to have any difficulty with you either.' I left to await the verdict. He was as good as his word: a month later I received a letter stating that, as a result of my submission, the Board had established new rules. In future, any surgeon who was a Fellow of the Royal College of Surgeons in

England, had been qualified for ten years and had been appointed to a teaching post at a University, would not have to write the examinations. So I established a precedent and saved many senior Fellows a trying, indeed nail-biting experience. Later, on application the American College of Surgeons awarded me the Fellowship of their College, the F.A.C.S.

Before appointment to the Chair, the University authorities stipulated that I should state my intention of becoming an American citizen, a stipulation which I found welcome. In due course, after the usual period of naturalisation we pledged our loyalty to the United States and were welcomed at a comfortable ceremony with a number of others in the New York City Hall. A slap-up lunch at Giovanni's followed as a celebration.

The 1959 exploratory visit to the States initiated lasting friendships with two distinguished orthopaedic surgeons, Leo Mayer and Joseph Milgram, both of whom I later invited to become visiting professors to my department at the Einstein. Joseph's advice on the American medical scene and, incidentally, its history, was invaluable. A product of Oklahoma University, he was a protégé of Arthur Steindler. Leo Mayer had been an associate of the great pioneer hand surgeon, Stirling Bunnell. Leo's original work on tendon grafting remained his predominant interest. But more of these two splendid men anon.

Among my big ponderables was 'could we afford the American situation?' The Einstein started off by promising me all the research facilities, money and clinical prospects that I requested. However, had I been experienced in American university negotiations, I would have realised that Dr David State, Chairman of the Department of Surgery, which at that time controlled orthopaedics at the Einstein, was selling me very short. He was positive that the salary was adequate. I had severe doubts but was confident that, once started, I could make a living.

In Cape Town my practice was large and doing well. We had a charming home, but I was by no means financially stable. Yet there I was, with a young family, considering a transfer into the relatively unknown. Taking the long view, I would, for twenty plus years, be able to concentrate on the kind of work which attracted me and my children would have an American education and future. Before making any decision we hesitated and pondered long and with caution. The Americans were encouraging. My friends in South Africa mixed caution with envy, but the future of the children was the deciding factor.

Shortly after we had made the decision to move came Sharpeville, a devastating incident in the history of South Africa, in which sixty-eight Africans were killed in a watershed confrontation with police. Many South Africans began planning to emigrate, especially to Britain and America, which seemed to reinforce our decision. Considering the climate of the times, the move was obviously desirable.

Once decided, we had the problems attendant on selling our beautiful 'Acorns'—a great wrench, and of mobilising such assets as we had. We elected to move lock, stock and barrel, with all our furniture, including books, linens and other household appurtenances. It proved a far-sighted decision. A car and all electrical appliances would have to be bought in New York.

We made another happy decision. As it might take months before American visas for permanent residence were issued, we undertook what was formerly known as the 'Grand Tour'—taking the whole family on an extended journey to our destination. It was a golden opportunity for the children to obtain a first-hand international prospect,

We booked a leisurely voyage up the East Coast of Africa, calling for a day or two at each capital port, when we were able to explore the local scene. Life on board the pleasant Italian liner, the 'Europa', with a friendly crew, was an attraction in itself. The children soon became confident in travel, absorbing Beira, Mombasa and Zanzibar comfortably. The crew 'adopted' them and gave them the freedom of the ship. Pleasant days were enjoyed by all, with time to catch up on sleep, for reading, for games with the children and for letters to friends to make up for past neglects. We joined in all the ship's festivities; for the fancy dress, I remember taking Tessa, then a beautiful seven year old, as "Thank Heaven for Little Girls'.

Each morning while at sea, I spent two hours sitting in the cabin in front of an open porthole, starting my book on 'Internal Derangements of the Knee'.

From Suez, there was the option of spending two days in Cairo and meeting the ship again in Port Said. After nearly a year of the war spent in Egypt, I was happy to stay on board with the younger children while Nathalie and Anthony travelled to Cairo. Nathalie was fascinated by Cairo, where the highlight was a visit to the Tutankhamen Exhibition. However, she was appalled by the restrictions placed on their movements.

The atmosphere of martial law was oppressive. Security guards accompanied them everywhere. She needed to buy a spool for her camera. The guard stopped her and asked where she was going. When told, he said no, she must stay in the hotel, he would go for her. She had planned to 'phone some ex-Capetonian friends then living in Egypt. When she got up from lunch to make her way to the telephone, she was again intercepted by the guard who asked what she wanted to do and then whom she wanted to 'phone. Realising that it might be unwise, she changed her mind and said that all she wanted was to buy some newspapers.

A calm sail across the Mediterranean brought us to Venice. From our first glimpse of the lagoon teeming with gondolas, sails and all description of craft, the entire ten day stay was exciting and pleasurable. Anthony enjoyed an excursion on his own to Austria, while we took the younger children sightseeing, including a visit to the ancient anatomy school at Padua. Just after eight o'clock each morning we would sally forth to galleries, museums and cathedrals in devoted pursuit of culture. The afternoons were free for the boys to do as they wished. They quickly picked up and imitated the cries of the gondoliers. To much amusement, unseen from our upper floor hotel window, they would yell and lure unsuspecting boatmen into unexpected and confused changes of course.

Before embarking on our 'Grand Tour', Nathalie had explained to the children that on arrival in America we might have to live on capital for a while and that, although we should have a wonderful time travelling, we ought on all occasions to be as economical as possible. To give them travel experience, each of the boys in turn would be 'Chancellor of the Exchequer' when he would be responsible for changing our foreign currencies, budgeting and settling bills. We encouraged them to choose restaurants with good food and best value. We indulged in excellent Italian food and soon had our favourite restaurants, all at the waterfront. Tim's sole diet was 'polla rosta' and 'ouve'—roast chicken and grapes, from which we could not coax him, but the others sampled a more varied menu.

From Venice we travelled to Fierra di Primiera, a charming, unspoilt village in the Italian Alps, where, in a simple but first class penzione, our warm-hearted hosts provided all our requirements and kept us very well fed indeed. I went climbing in the local mountains with the children who experienced their first snow there. One morning, while Timothy and David boisterously pelted each other with snowballs, Timothy slipped and cut his forehead slightly. David rushed back practically in tears to

warn Nathalie of the urgency of the injury. He was so upset while trying to break the news gently and in insisting that it was 'nothing, absolutely nothing to worry about that she was convinced poor Timothy was in a critical condition. However the local pharmacist was easily able to provide for the necessary patchwork.

We took train to Florence where, after a first night at an exceptionally noisy inn on the Arno, we moved to a comfortable hotel on the slopes overlooking the statue of David in the Piazzale Michaelangelo. During the month that Florence remained our base, kind friends Franco and Pia Passigli looked after us with thoughtful hospitality. Each day following their suggestions, Nathalie would take us to wonder at another of the beautiful city's dramatic and historic showpieces.

At the invitation of Professor Zanoli, the senior Italian academic in orthopaedics, I went off to Rome for a few days where I was introduced to his elaborate team. I was disappointed in that he had nothing new to show me.

We were pleased by ongoing evidence that the boys were absorbing our economic discipline. One day Nathalie said to them: 'Please look after Tessa this afternoon. I wish to go to the hairdresser.' Whereupon 'Chancellor' Timothy responded 'I'm sorry Mom, but we can't afford it this week'. She had to extract herself from them deviously and exchange travellers' cheques clandestinely at the bank to go off to her (now secret) appointment.

We continued by train to Paris, this time on the famous Orient Express. Having lunch with David (Chancellor) at his choice of restaurant there, we all had a hearty and delicious meal. When the bill was presented, it was duly handed to David, who to the intense embarrassment of Nathalie and myself said in a loud voice, "This man is a crook. I know the prices from the menu and he's overcharged you on everything. He continued with these accusations as I got redder in the face and smaller in stature as I tried to sink into the chair. The children all chimed in to exclaim on how we had ever managed our travels without them if we could be so easily 'had'. Finally, I was forced to call the maître and somewhat haltingly point out the errors. To our utter amazement, with aplomb and certainly no surprise, let alone apology, he took the bill, crossed it all out and re-presented it with the correct amount. The look of satisfaction and gratification on the children's faces was something to live with and down for quite some time.

But that was not all. There had been several newspaper accounts of instances where tourists were 'ripped off', but we felt safe when we booked into a pension run by two elderly and punctiliously refined English women. The pension was homely and we all enjoyed our three days sojourn. Came the time to leave and this time it was Timothy's turn to check the bill. 'Dad, they're overcharging us.' I could hardly believe it, but he was insistent. I went up to the desk and diffidently said to a prim proprietress 'I think there may be a slight error'. She grabbed the account from me and without hesitation or even checking, deleted the final amount a sad reflection on local business morality!

From France, we crossed the English Channel by train ferry. Two months in London were rewarding and it was pleasant to look up friends from my student days and from the war years. Our friends, Sir Ainslie Bridgeland and his wife Kathleen, had arranged for us to stay in two of his apartments in Chelsea Cloisters, in convenient reach of all parts of London.

Ainslie was a remarkable man, with the easy charm of assured leadership in any company. An Australian, he had arrived in London in his early twenties, with five ambitions—to become a millionaire, which, as a property magnate, he achieved several times over; to own a Rolls Royce he had three; to be knighted, which he achieved in style; a scratch handicap at golf, perhaps the most dicey, but he managed; and finally, membership of a leading golf club. He applied to the Royal

Sandwich, but was turned down as he was not backed by the right public schools. England could be unpleasantly snobbish in those days. Eventually he bought and became chairman of the club, as well as its prestigious neighbour 'Princes'.

He and Kathleen were heart-warmingly kind to us. They made us free of their beautiful home outside London and, for the Christmas weekend, invited the whole family out to Sandwich where we occupied one of the Dormer Houses. I played two rounds of golf at the club, but unfortunately, the serene surroundings were no inspiration and my play was as erratic as usual. Also, if ever I wished to see patients in London, Ainslie arranged an appointment as consultant to the London Clinic, of which he was Chairman. I could admit patients there whenever necessary. I was also free to use Rowley Bristow's rooms in Harley Street.

The atmosphere in London was stimulating. We arranged for an able tutor to instruct the children five mornings a week for three hours. In the afternoon Nathalie would take them on excursions to places and events of interest such as museums, art galleries and exhibitions. Their observations on the new environment and experiences were fresh and amusing. The theatre was a delight, entrancing the whole family.

Most mornings I devoted at least two hours to my book. I discussed it with H.P. who was encouraging. The libraries of the Royal Society of Medicine and of the College of Surgeons were my centres of activity. Gilbert Causey, a university friend from Liverpool, had become Professor of Anatomy at the Royal College. He arranged that two of his technicians work with me on dissection of the knee and also take photographs suitable for publication. It was a stroke of kindest fortune and their unstinted co-operation evoked deep gratitude.

There were pleasant meetings with John Charnley, a special friend. He and I had taken the Fellowship course at Guy's Hospital together under Hedley Atkins, later President of the Royal College of Surgeons and Professor, later Lord Brock, whose quality of teaching was an experience to enjoy. When John and I met again in London, he had newly completed his hip replacement for osteoarthritis, which he wished to demonstrate and discuss with me. I was impressed and we spent long hours in talk. A Manchester man, he had been given special facilities at the Wrightington Hospital in Lancashire where he was doing the experimental work and an increasing number of hip joint replacements. He invited me to Manchester, where I was welcomed by his charming wife Jill. After a couple of days he suggested I prolong my stay and do a number of the operations with him. I hedged; I was not completely certain about the device and, to a lesser extent, about the operation itself.

In 1966 both John and I were invited to Vienna to take part in a SICOT symposium of surgery of rheumatoid arthritis. Both our contributions were on the first morning of the six day meeting. Neither of us felt comfortable in Vienna and so, with Jill we decided to utilise the time for a short holiday. We travelled together to Rapallo. The way there and the first night we spent talking solidly, much of it about his joint replacement.

Again John invited me to work with him and again I mistakenly turned down the opportunity. But I was tired and the few days in Rapallo were a good rest. One morning, to the surprise and, I realised later, the consternation of some of our local friends, I climbed a nearby mountain by myself. They considered this somewhat foolhardy, but I enjoyed the brisk feel of the climb and the air and the tremendous view.

One of my great subsequent regrets is that I did not accept John's offer. I would have been among the first in the field and have joined in one of the great successes in modern surgery. The Charnley

Hip, in somewhat modified form has become world famous. Someday I should write an article on 'Missed Opportunities' of which, sadly, there have been many in my life, some of major importance, and my neglect of John and his invitation is one of them.

## Chapter XIV America- Settling in Gently

After the two months in London, we left for the United States to a new life, a new home and a new career. We sailed in the Queen Mary, in comfortable quarters. The atmosphere aboard the massive ship was different from the warmer, more intimate and friendly Italian liner enjoyed on the voyage up the coast of Africa. Also the duration, six days, allowed only superficial acquaintance with other passengers.

We arrived in New York on a cold day, with traces of snow on the sidewalks. To be ready for the academic year, Anthony had preceded us and was waiting on the quay with the inimitable Alf Katzin smiling a broad welcome. Alf had organised everything. We were whisked off the ship and through Immigration and Customs. A car was waiting to transport us to his apartment in the 'Majestic' overlooking Central Park. He was to leave for Europe for a year to chair a United Nations Conference, during which time we would stay in his apartment— generous arrangement on our behalf and of a quality typically 'Alf'. The apartment itself was larger than we expected, with big, high-ceilinged rooms and we were more than comfortable. Alf had left it fully provisioned, and also his venerable Oldsmobile for our use. At night this was parked in a nearby street.

The Majestic is a massive building ably staffed by an adequate number of friendly Irish. It is right opposite Central Park West on 72nd Street where traffic is heavy. The noise did not worry the children or me, but it took some time for Nathalie to become used to it.

The first morning I set off to reconnoitre the traffic. Oddly enough, I felt no trepidation at driving in the huge city of the 'other' side of the road. The Oldsmobile started easily; I drove across town and then eventually down 2nd Avenue. In central New York all the 'Avenues' run from North to South and the 'Streets' from East to West. Each cross street is heralded by four traffic lights so timed that at certain speeds the intersections are negotiated without pause. I did not know that at 59th Street there were an additional four lights for the extra crossing for traffic to 59th Street Bridge across the East River—in other words, to me an unexpected four lights. I stopped in the middle, not realising I was obstructing the cross-town traffic stream at that point. There I sat placidly, very interested in my surroundings and the buildings when an enormous Black policeman walked across with stately gait. He came up to me and rumbled: 'Say buddy, what do you think you're doing? I looked at him in astonishment, pointed to the red lights and said plaintively: 'But Constable, the light is red'. A tremendous grin transformed his features: 'Oh Sir, I see you come from London. I was there with the Army during the war and I just loved London'. He stood in happy smiling reminiscence ignoring the traffic hooting and honking on every side until suddenly he recalled my Infringement. 'Excuse me Sir, would you mind going forward a few paces, just to pass this light, so that we are not hampering traffic.' I did so, but then resumed chatting to the friendly constable who, because of that appellation, amiably disregarded the traffic offence.

On our arrival, among the messages of welcome, we had found warm words from Leo Mayer, Leo Davidoff and Dean Kogel. The next morning I met my new Department of six full-time residents headed by one full-time Assistant Professor. He was all smiles and most welcoming, but I soon realised that he bitterly resented my coming and supplanting his prime position. Actually, when I began at the Einstein, the Head of the Department of Surgery asked me if I would like to 'get rid of him'. He did not find him easy to get on with. Unfortunately, in my conceit, I replied: 'I've never had any difficulty getting on with staff, so I'm sure that I can deal with him'. This was a grave mistake. He was impossible and obstructive, and, in the end, after some two years, procedures to dismiss him through the Dean and the Executive Committee were time consuming and made unpleasant by his

abrasive personality. However, I soon settled down with the rest of the staff who were supportive and assiduous in their care of patients, and to the teaching of students without ever feeling uncomfortable in their company.

Newly elected President John Kennedy was an immediate inspiration. He imbued young and old with the spirit of 'making America great'. American strength lay in a scientific approach supported by abundant resources. In medicine, this scientific method was applied in patient care as well, with laboratory tests an all-important factor in diagnosis, rather different from the British approach of painstaking clinical history taking and careful physical examination of the patient, which Alan Apley later summarised in 'Look! Feel! Move!' In other words, the patient and not the laboratory was the key. I felt my most useful function would be to introduce this concept in the American setting, and determined that my students and colleagues would, in this way, acquire the best of both systems. These principles were energetically applied at the Einstein and in due course many, if not all of these objectives, were achieved.

The standard of orthopaedics was upgraded by intensive instruction for residents and students by staff and visitors. Divided into five groups, the unit covered general orthopaedics, trauma, paediatrics, clinical and scientific research, plus a section comprising the group for which I took personal responsibility. The latter spent each day with me in all I did, in outpatient sessions—both private and hospital, in the operating room and at conferences. Each had a three month stint as my chief resident, assisting me and building up proficiency at every operation, fracture reduction, joint manipulation or judging the site of an injection new to him. After that, if he showed confidence, I would 'hold his hand' until he demonstrated absolute mastery of each technique. Learning and acquiring accurate assessment and diagnosis was a slow, but most important ability. The residents were obviously and vocally pleased and eager with the new arrangements and their progress and increasing clout were gratifying. That they were becoming 'clinicians' was evident at the unit staff conferences held every Wednesday morning when each of the groups would present three or four patients specially 'worked up' for the occasion.

An interesting difference between residents in British medical schools and their American counterparts is the latter tend to stress their own opinions, often unasked. Also they did not always live up to my standards of proper respect to seniors from other units and departments, nor show consideration for members of the families of fellow staff, who might visit the Hospital. In other words, they tended to be off-hand with everybody. I quietly pointed out these inadequacies. Admonishments and suggestions were accepted without demur. I was delighted by the response although treating them as if I took this reformed behaviour for granted. Soon and unexpectedly, when I went down to the communal dining room for lunch, my residents would rise to find and hold a chair for me, which caused stares from other chiefs and residents. Years later, one of the residents, in a moment of confidence, told me they became 'respected': I made them feel an elite unit. Residents of other departments began to copy their polite habits.

An unofficial light-hearted question was whether they would emulate my 'British' accent before I succumbed to an American pronunciation. A roar of laughter greeted a chief resident's 'cervical' for 'cervical'; my speech remained unaffected.

The income Dr State had offered and which he assured me would easily cover my living expenses and the education of my children proved ridiculously inadequate, so much so that within months I expostulated with him and consulted Marcus Kogel. The latter had not been involved in the negotiations and when I described the outcome, was appalled and immediately doubled the original offer. Even that was not major, but it was decided that to augment it, I could also indulge in a limited

private practice. I had wished to work full-time at the University and concentrate on teaching and research, but this was obviously the compromise action.

Friends Joseph Milgram and Victor Frankel at the bustling Hospital for Joint Diseases arranged that I should have facilities for treating and operating on private patients. Soon the same facilities were accorded by Doctors' Hospital on the East River, also in Manhattan, directly opposite Gracie Mansion, headquarters of the Mayor of New York. When Dr David Gurewitsch, a specialist in Physical Medicine and personal physician to Eleanor Roosevelt, suggested that I share his rooms on East 60th Street, close to Bloomingdales Store, the rich ingredients of a city practice were available, with the possibility of a major income and very hard work, but with less of attention to Academia.

Unofficially, I also found myself orthopaedic surgeon to the personnel of the United Nations at their headquarters in Manhattan. Their chief medical officer, Dr Lee, was a Chinese physician who instituted a warm friendship. Alf Katzin returned to the States and, as Undersecretary of the United Nations, was much involved with weighty deliberations. He worked with Trygve Lie and Dag Hammarskjöld, each in turn Secretary General, and with Ralph Bunche whose mediation efforts in the Middle East were acknowledged by the award of a Nobel Peace Prize.

Visits to Alf's office on the thirty-eighth floor were not infrequent and Security on the ground floor soon did not hesitate to privilege me with Immediate entry. Alf had tremendous admiration for Bunche and Hammarskjöld. I was introduced to each, but without time for profound conversation. Bunche was friendly, but Hammarskjöld seemed distant and reserved, perhaps a feature of his Swedish nature.

After our congenial stay in Alf's apartment and with the support of the Einstein financial department who guaranteed the residual bond, we acquired our finest home. 5220 Independence Avenue, Riverdale embraced a beautifully built luxurious house, a front garden and at the back, a 'yard' of unspoilt land with a small wood on one side. It is a part of Riverdale where only private homes with gardens are permitted, without encroaching blocks of apartments or shops. Just north of the George Washington Bridge across the Hudson River from Fort Lee, site of a battle between the British and their American colonists, it had been designed and constructed for himself by architect and engineer Irving Sager. It was our good fortune to buy it from him and so doing, also make a good friend. 'Acorns' had unsurpassed charm and beauty, but this, in its attention to elegance, detail and finish, was the most complete home in our experience. It had every possible convenience and labour-saving device. The interior was attractive, with spacious rooms, every bedroom with an elaborate walk-in dressing room. The linen cupboards had mirrored shelves and lights lest heaven forfend! it should be difficult to find anything at the back. A cosy study which became the family den, included fireplace, bar, refrigerator and shelves behind panelling. Both study and sitting room had easy views of the river and an abundance of wall-space for Helfet pictures and overflowing bookcases.

Nathalie was delighted with, and soon absorbed in her new home and garden in which we discovered two small deer, some representatives of the raccoon family, a sprinkling of pheasants, plus a variety of colourful birds. Cardinals with bright scarlet plumage made a brilliant sight, especially in winter against the white snow. Raccoons are extraordinarily shrewd and persistent and these were soon wise to any traps, blocks or deterrents to their exploration of the vegetable patch. We needed bricks on the large rubber garbage bins to stop them knocking the lids off every night.

An early problem after arrival in New York was schools for the children. Anthony had made his mark with the authorities of Columbia University. In spite of the fierce competition and extreme difficulty

of admission to all Ivy League schools, he was accepted as a full-time boarder at Harley House, a residence of Columbia.

When we came to consider where David and Timothy should go, we were told that the Bronx School of Science had a tremendous reputation academically, but on investigation found it so scientific it had not one sporting activity. The other public schools serving our area were in an insalubrious, tough part of the Bronx. Part of the school system supported by the city, with negligible fees, many of their wild student body carried knives and similar unpleasant instruments—so that was out. Alf then contacted a friend of his, principal of a private school in Stockbridge, Massachusetts, a town famous for its music festivals. The boys spent a year there. To start with, we were not happy that they would be so far away, with no easy transport link. The headmaster invited us to spend the Christmas break at the school, where we were housed in one of the master's cottages. We were fed in the headmaster's home, a good half-mile away. The car had to stay in the open and the first morning, when we tried to start it, found the oil as well as the water had frozen solid. But the staff were not fazed and the car was towed into an underground garage to thaw. Meanwhile we walked to the headmaster's house. By the time we reached it, our faces were numb. David and Timothy had offered to drive the school tractor to clear the road of frozen snow. It seemed odd that the two South Africans were the only volunteers. Timothy went out early and when I saw him, to my horror, his face had begun to show the distinctive white, almost transparent appearance of early frost-bite. We rushed him indoors. I hoped that at last I would learn to ski, but because of the intense cold, all skiing was cancelled. After three days the car started easily and we returned to New York.

The headmaster had been charming, but we were doubtful about the school. The boys were allowed unbridled freedom and were uncontrolled. In the subsequent words of our sons, it was 'a joke, a school for rich American retards and foreign students'.

We then considered three excellent private schools in Riverdale and plumped for the Riverdale Country School for Boys. Later Tessa was enrolled at the sister establishment, Riverdale Country School for Girls, and settled down happily. She had not been particularly easy at the small private school in Manhattan, not far from the Majestic, that she originally attended. To get there each day we arranged a taxi service. Many of the young girls were spoiled and did not appeal to Tessa's rather stiff upper lip. (Once she returned disconsolately from a birthday party. When Nathalie eventually elicited the reason she was told that the beautifully illustrated book taken as a present was diminished by the attitudes of the other girls, whose presents, such as a dressing table set, were all expensive but, to our minds, most inappropriate and excessive for children of eight or nine. It was an opportunity to proffer advice valued for the rest of her school days and ever since. Tessa has a deep appreciation of good books, fine art and Intrinsic merit.

The children were comfortable in their new schools and there was much to approve in the advanced teaching. New York, besides the worst of everything, also has the best. Indeed, one of the great pluses of life in America was the education our children received. Their South African schools had been the most reputable in the country, but the systems were dogmatic, with a tendency to didactic teaching and rote learning. Now it was replaced by teaching which stimulated and inculcated original and more imaginative thought. Any suspicion of plagiarism, however unintended, was severely censured and penalised. They were encouraged to research and it was good to hear them express their own ideas.

They made friends, who were brought home to meet us. David and Timothy's gregarious natures were soon surrounded by a number of pleasant boys. Tessa selected and made friends more slowly. The boys did well at games too, and each won their letters'— the American equivalent of 'colours'—

in the first year. David played tennis and joined in football. I was amazed at Timothy when watching him compete in the Ivy League Schools Two Miles Championship (i.e., the All-American Ivy League). Normally his walk is not over-elegant, but he transforms into a most graceful runner and I was proud when he became the Two Miles Champion, and in a record time.

From New York we had a number of bright, indeed memorable holidays. The first summer, each of the boys arranged a working holiday. In American colleges the football team is special and their performance provides prestige. Anthony had become a member of the Columbia University football squad. The coach organised summer jobs geared to building up their strength. For Anthony, he found a job with a construction company in Manhattan engaged in heavy building operations. He would traipse home exhausted in the late afternoons, covered in dust and mire, but was paid quite well for his exertions.

With the rest of the family, we left for a sybaritic month in Connecticut, at the Davidoff's home in New Canaan, then on to the hills of Maine and Vermont, and, incidentally, a first sight of the fabled beauties of New England which were exaggerated later in the year when the trees adopted their vivid autumn tints. A gentleman of our acquaintance ran a summer camp in the hills of Maine. David was engaged as an instructor while Timothy, being underage, was given his keep as an apprentice. In any event, it gave them healthy occupation.

It was a time for leisurely adjustment to a new environment and way of life. We had time for walks and bathes. The delicious Maine lobsters were an important item in our diet.

In New Hampshire we spent a night near Mount Washington, which, at over 6000 feet, is the highest peak of the North-East United States. Next morning we ventured a gentle exploration. Nathalie was in light shoes and Tessa in sandals, but we would see what the going was like and how far we could comfortably climb. I bore the multi-coloured basket with our picnic lunch. Except that the girls' feet became slightly chafed as we neared the top, the deserted climb was simple. Suddenly, over a ridge, the downslope was visible—presenting a totally unexpected sight. Surrounded by much activity stood a shop with all the amenities and necessities for leisurely picnicking and surprisingly, leading up to it, a winding motor road, and also a small local train. After satisfying our curiosity, we took the train back.

The boys had amusing tales to tell of the ignorance of conditions in South Africa. David was quizzed by a group of ladies who were surprised that he and Timothy spoke such good English. Where had they learnt it? David's impish sense of humour took over: 'We travelled on a slow ship which took weeks to reach America. On the ship, sailors taught us'. He told them that conditions at home were completely primitive. To keep out the lions, a large stone was rolled against the mouth of the cave where we lived. It had to be moved every morning before we could emerge. The boys chortled as they related the stories, absolutely amazed that adults could swallow such ridiculous fabrications. The following year, David enjoyed a summer job driving a school bus to collect children from homes and pickup points to a central play venue.

## Chapter XV At Einstein and Elsewhere

Settling in at the Einstein and developing a handpicked unit, work became more interesting, pleasant and productive. I was invited and lectured in a number of Medical Schools in the United States and abroad, published several papers, completed my first and engaged in a second book. I was happy in my lot throughout those hectic years.

The teaching programme progressed. The main occasion every week was the Wednesday morning conference for the whole staff, with all the residents who worked in the Bronx Municipal Hospital, the Lincoln and other associated hospitals of the Einstein. These meetings became vigorous and searching occasions. The change in participation became noticeable as my approach to clinical orthopaedics permeated.

As the work load grew, the numbers of residents increased and, by the time I left, the full-time staff of residents numbered twenty, with a part-time staff of fifty-one. It was fortunate that I was not expected to struggle for the appropriate increases in our budget. Yeshiva University allocated money for improvements of office space, for additions and appointments in our library and, most importantly, for extra staff, including external lecturers.

I also had funds each year to send alternate residents, as their training neared completion, to the week of the annual meeting of the Academy of Orthopaedic Surgeons. Each resident was allowed six weeks as a special elective at any other medical school of his choice. In addition, all our residents were sponsored to a special course at Mount Sinai Hospital run by the world-famous professor of pathology, Henry L Jaffe. Emanuel Kaplan, equally distinguished anatomist and authority on the hand, gave a special series of teaching clinics at the Einstein itself.

All the orthopaedic staffs from neighbouring programmes were invited to our Residents' Day. Other participants came from near and far, with attendance increasing yearly until, in 1970, nearly two hundred turned up. All of them were lunched in the pattern set by Al Shands who arranged similar days twice a year at the Du Pont Institute, at several of which I was a guest lecturer. The clinical symposium was held in the Robbins Auditorium, a spacious forum equipped with the most modern audio-visual aids. Einstein talent was mobilised to demonstrate our areas of expertise. Members of staff and most of our residents presented papers. Celebrity visiting lecturers were invited to contribute and invariably accepted.

We also started surgical anatomy seminars conducted by two superb teachers—Gershon Efron and Ralph Ger, South Africans drawn to the Einstein.

But most successful was the Thomas Connection<sup>1</sup>. As part of my ambition to combine the best of British clinical tradition with the best of American scientific approach, on an early visit to London, I sat down with friends at St Thomas' and offered an arrangement whereby their senior resident, always a proficient young man, would spend a year at the Einstein, teaching clinical orthopaedics to the residents and students. In exchange, he would have the opportunity to complete a research project, to indulge in all we had to offer and, under our aegis, attended the Academy meeting each year wherever it was held and to spend a month in any American programme he wished. Finally, we would make available \$20,000, at that time enough to cover living expenses, support of a wife and to allow for travel. Thomas' were delighted with the potential of this programme. The appointment to Einstein was considered an advantage in career agenda. The quality and reputation of this American exposure enhanced experience and was valuable when applying for subsequent teaching, hospital or other appointments. In return, we were rewarded with a succession of top class men—delightful,

popular, conscientious and excellent teachers, each a personality much admired by my residents. Each in turn brought an individual plus to the programme. David Gruebel Lee was the first participant from Thomas' and initiated its success. After his year of splendid service he returned to St Thomas' where his subsequent career was an admirable example. Besides joining me in editing two books, he eventually wrote a masterly volume on disorders of the hip.

David and his wife Lydia became close friends and there has been many a charming occasion spent at their home in Farnham. Both great and sincere liberals with an integrity which gained easy recognition, they are knowledgeable and sensible on contemporary society and current affairs.

Before the war Alan Apley had been my junior at St Thomas'. In my experience he was the teacher of orthopaedics par excellence. Twice each year he organised a course at Pyrford for the English Fellowship, always well attended by aspirants from all over the Commonwealth. On two occasions I was one of the lecturers. I invited him to give a two week course at the Einstein. This was so successful that it became an annual event and was later repeated for other medical schools and the American Army. His visits eventually stretched to include Residents' Day and other programmes.

In 1984 a two day Twentieth Anniversary celebration of the Einstein-Thomas' Connection was held at the Royal College of Surgeons in London, to coincide with meetings of the British and International Orthopaedic Associations. The first day was devoted to contributions by Thomas' men, the second by those from Einstein who had crossed the Atlantic to show regard for their British colleagues a happy reunion with talks of rare quality. Alan, now Vice-President of the Royal College, arranged that august venue and capped the meeting by dining all the participants at a nearby restaurant where, over the wine, undying devotion was freely sworn.

So all in all, our residents were gradually well-prepared to take their examinations for the Orthopaedic Boards and in due course we achieved a hundred percent pass rate, with outstanding young men competing for places in the Einstein programme. The residents' roster acquired an International complexion, with among others, Julius Okuboye from Nigeria, Shinichi Mitani from Japan and Enriques Ergas from Colombia, all of whom acquitted themselves admirably.

Civil rights presented itself as an issue in the case of Okuboye, whom I had considered a more than satisfactory resident. When he left Einstein, he applied for the privilege of admitting patients to several hospitals in Florida, but was rejected by one. He appealed the decision to the Federal Government. The case received publicity and the local city council withheld its annual funding to the offending hospital, some \$65,000, pending the outcome of the investigation. Ultimately Okuboye was appointed. There were several black members of staff at Einstein, but he was the only one to experience problems.

With a strong Jewish presence amongst staff and residents, pro-Israeli sentiments were pronounced. In 1967, U-Thant's unilateral withdrawal of the United Nations troops from the Sinai buffer zone, followed by Nasser's manoeuvres and threats, aroused much anger so I was not surprised at the number of residents who volunteered to serve in the Six Day War. In due course they returned as new heroes.

It is pleasing to record some of those residents who attained professional status, while most of the others have flourishing units and thriving practices. Richard Laskin, now professor in Long Island Jewish Hospital, is innovative and successful in hip replacement surgery. Morton Spinner has become a recognised authority on surgery of the hand, a burgeoning discipline. Engaging David Hirsh, a favourite with all, has taken over as chief at the Bronx Municipal Hospital, the main centre for

Einstein orthopaedics. Uriel Adar, tough but amiable Israeli paratrooper, is a paediatric specialist. He has since acquired a large farm in Westchester where he expends his excess energy.

David Mendes, another Israeli, is indulging a splendid career. Originally met on a visit to Israel, he joined my department as a resident a few months later and proved unusually capable and conscientious. After a valuable stint at the Hospital for Special Surgery, the orthopaedic centre for Cornell University, he returned to Haifa and soon made his presence felt in Israeli orthopaedics. He was appointed department chief at Rothschild University Hospital which, with time, has become the centre for 'implant' surgery, mainly for replacement of hips and knees. Each year he organises orthopaedic symposia to which are invited an international cast of lecturers, a most successful venture. I was pleased to chair the first two and have taken part in subsequent occasions, while staying with his pleasant family.

Stanley Hoppenfeld has produced an acclaimed treatise on Physical Signs, in which Einstein teaching is evident. He is also an authority on surgery of the spine. Brilliant scientifically is Laurence Rosenberg, Chief Resident during my first year. Gently spoken and obviously more interested in the research than clinical aspects of orthopaedics, the question of his future exercised me. His residency completed, he applied for a post at New York Hospital to work in their celebrated Biochemistry Laboratories down on 22nd Street, but on my advice, spending a day a week in the clinics and operating room. In times of depression when research grants become scarce, scientists without a clinical leg to stand on tend to be left high and dry. Also one needs the stimulus, indeed the inspiration from patients' problems to generate ideas for research and progress. This conviction helped me and also led to a career of great merit for Larry. After New York University, he returned to Einstein which had by then been absorbed by the Montefiore. A special laboratory complex was placed under his control and direction and with early successes, achieved international significance and an established reputation. He remains the same quiet, modest Larry.

Another resident of scientific bent was Charles Weiss. He has, in addition, a flair for organisation which resulted in a burgeoning department in Miami. His career took off when Henry Mankin was invited from the Hospital for Joint Diseases in New York to the prestigious Chair of Orthopaedics at Harvard in Boston. Members of his Joint Diseases team, among them our Charles, accompanied him. From Boston, Charles was appointed Chief of Orthopaedics at Mount Sinai Hospital in Miami. To start with, he requested my help and advice, so I spent three sessions with him and his family in their large house of Spanish design. The early problems of the new department were a concern. On one visit 'A Day with Michael Freeman and Arthur Helfet' was arranged which we spent discussing problems of the knee, Freeman being a well-known, articulate and voluble surgeon from London. On another occasion an expanded programme, embracing local speakers and a number from other centres, was organised. Towards the end of the 1960's Charles invited me to join him and settle in Miami. This suggestion was seconded and supported by a very able physician, also originally from South Africa, by name Nate Segal, who, with his wife Esme, had built an unusual and attractive house at and partly over the water of the Bay. They actually found a similar home, ready for occupation, if we accepted their proposal. I was tempted, but hesitated to uproot and again suffer the burdens of resettling. Advancing age also discouraged new enthusiasms.

While still in Cape Town, I had operated on Stephanus du Toit's knee for a student rugby injury. After his housemanship there, he wrote me at Einstein: would I accept him as a resident to specialise in orthopaedics? It was an easy decision. He had been outstanding as a student, showing qualities of leadership including captaining the rugby team. Eventually a popular Senior Resident at Einstein, he is now Chief Orthopaedic Surgeon at Natal University in Durban.

Major Gladden became a member of the unit after I received a call from his uncle, head of orthopaedics at Howard University in Washington DC. He was charming on the 'phone and told me his nephew was a promising doctor, keen on orthopaedics, whom he was anxious should have the Einstein American/British training. I responded that I would be happy to interview the young man but emphasised my policy of taking residents strictly on merit. At the time I was unaware that Howard was a black university and was taken by surprise when a large black man with an engaging ear to ear smile walked into my office. On questioning, he told me that at Howard he was given much operating to do, but on his own, without guidance, which worried him. His refreshing modesty was appealing and I accepted him on the spot. An excellent resident, popular with staff and colleagues, he stayed with us for five years till another 'phone call from Howard requested he be returned to them to head the orthopaedic unit. He is now chief orthopaedic surgeon at the Columbia Hospital and also in private practice, to a football club. Of interest considering their respective backgrounds, Major Gladden chose Stephanus du Toit, of all the Unit, as his mentor and best friend.

On the whole, 'my residents' as I always thought of them, were a pleasant and tolerant group, able and ambitious, but hard-working and conscientious. In time, I was very proud of my fledglings and still appreciate news of their progress and achievements.

Early during my tenure at Einstein, a young man from Chicago spent part of an elective with me. William Kane was interested in the 'Corocoid Transplantation for Recurring Dislocation of the Shoulder' published in Rowley Bristow's honour. A year or two later, he wrote that he was to make an audio-visual presentation to the American Academy of the Bristow-Helfet Operation. This further publicity was pleasing.

Of Einstein's senior personnel, most impressive were Dean Marcus Kogel and Leo Davidoff, the Clinical Dean. After enjoying the benefit of Kogel's forceful personality and strongly supportive leadership for several years, I regretted his retirement, more so as a successor proved totally obstructionist, positive only in creating tension, and made himself highly unpopular. Eventually the President of the University had to sack him and forcibly order him out of the Dean's office. His departure led to general relief.

Professor Leo Davidoff, highly respected as a leader of American Neurosurgery, with his wife Ida, was charming to us. A month of our first summer vacation had been spent housesitting at their luxurious home in New Canaan, Connecticut while they were abroad.

Equally highly regarded, Professor of Neurology Saul Korey and I had in common our interest in the spine. One day he mentioned that he suffered back-ache, but abstained from seeing me as I would advise surgery. I replied with comforting noises. When eventually he consulted me, the meeting was traumatic for both of us. On examination, I realised that the back-ache did not originate in the spine, but was due to a tumour at the back of the abdomen. I was most unhappy to tell him his symptoms had no spinal cause. We both knew I was pronouncing a death sentence, and indeed, he died within the year.

Arthur Abramson, Professor of Rehabilitation Medicine was a colleague who became a close associate. During World War II, a bullet in the back had rendered him paraplegic. With great courage he taught himself to walk on crutches and to drive a car, motoring every day from a suburb north of the Einstein. From a wheelchair he ran a large and excellent department, with which mine had much in common, so we saw each other frequently. He was supportive, particularly in my early days.

Gershon Efron, a fellow Capetonian, came to Einstein as one of the consultant staff and rapidly made his mark, particularly in the surgical anatomy seminars. The students elected him 'Teacher of the

Year'. Soon after his arrival he married his charming Jane in the New York City Hall, with Nathalie as Matron of Honour and myself as 'Best Man', celebrated with lunch at Giovanni's—one of those happy days always cherished in memory. Years later he was appointed to the Chair at Mount Sinai Hospital, attached to Johns Hopkins University in Baltimore, a position he holds with distinction to this day. Gershon, Jane and their three strapping sons remain dear family friends.

Before leaving London for the States, experiencing a measure of trepidation about the new career facing me, I had consulted H.P., whose advice was 'stay close to Philip Wilson and Al Shands', both of whom proved most kind and helpful. Philip Wilson, like Arthur Steindler, was much respected as an 'Elder Statesman' of Orthopaedics. Chairman of the Department at the New York Hospital for Special Surgery, with a prize team of specialists, he was of considerable assistance while I adapted to the ways and customs of America. He became my court of appeal on unusual problems, general as well as clinical. Once settled, we enjoyed reciprocal dining in New York and Riverdale, with his charming French wife a good friend to Nathalie.

Al Shands was Director of the Du Pont Institute in Wilmington, Delaware, of renown in America and internationally. Biannually, the Institute hosted a programme of orthopaedics by invited lecturers embellished with a generous lunch. I became a frequent lecturer, by request usually on the knee or spine. These experiences were enjoyable, stimulating and helpful in improving the Department at Einstein, with our own Residents' Day based on a fine example. The Shands were warm friends, Inviting Nathalie and me to weekends at their home on the Du Font Estate, 'Longwood', with its magnificent and justly famous gardens. Polly Shands shared Nathalie's passion for gardening.

Joseph Milgram, a former Chief of Orthopaedics at the New York Hospital for Joint Diseases and by then semi-retired as a consultant emeritus, is an exceptional character. He and his wife Altabelle lived in a remarkable five storey house in Crown Heights, Brooklyn. To be shown round their home was to visit a museum. An avid collector of the unique and the unusual, remarkably, he had researched every item. He had an extraordinary talent for storing all facts, odd and otherwise, in his memory bank. Once, when he and I were guests at the University of Rome, the Italian orthopaedic residents made a fuss of us and, in our off-time from the meeting, provided entertainment and acted as our eager guides. Joseph wanted to revisit the Vatican libraries—a first for me. Most Impressive was the room of ancient bibles. Joseph's knowledge of these amazed us all. Later, to add to a jovial lunch in the village of Trastevere, the residents brought musical instruments and we enjoyed an impromptu concert—a tuneful and happy occasion. Joseph continued his dissertation on bibles; my contribution to the urban festivities was tales of life in the rural backveld of South Africa. While in Italy, Nathalie and I took an excursion to Sienna to witness the mediaeval splendour of their horseracing pageant. Riders and horses, all arrayed in black and white panoply, made a brilliant spectacle.

In due course the Albert Einstein elected Al Shands and Joseph Milgram Honorary Visiting Professors. Both would visit and lecture to residents and students, always instructive and entertaining occasions. They reciprocated by inviting residents of my unit to special seminars and other teaching sessions on their programmes.

One of the first to advise, indeed to persuade me to move to America had been Leo Mayer. Then approaching seventy, Leo was an orthopaedic institution in New York. Also a past Chairman of the department at the Hospital for Joint Diseases, he verily 'adopted' me. He several times requested that I consult with him on his patients. It became apparent that, besides my opinion, in cases where surgery was indicated, he wished for my assistance. In the operating theatre it transpired that I was to be the surgeon, with Leo assisting. Sadly, he kept going for too long, a lesson to all to stop before fading. He died at a ripe old age, much missed, but no longer commanding pristine respect. However,

I was grateful to him for many things, including his constant encouragement. He brought to meet and talk with me his teacher and colleague, Stirling Bunnell, a considerable figure in surgery of the hand, who had written the definitive work on the subject. It was an event not only for me, but also for the Einstein.

Invitations to take part in various meetings and orthopaedic occasions entailed travel to a number of medical centres and also to overseas cities. Of great personal satisfaction and enjoyment, from my second year in the States, I presented an 'Instructional Course on the Knee Joint' at the annual meetings of the American Academy of Orthopaedic Surgeons. These stupendous events were a yearly 'must'. Thousands of orthopaedic surgeons and residents from American programmes and from abroad would attend. In fact, they were so big as to be unwieldy. Chicago and San Francisco provided the most suitable venues for the enormous gatherings. In the latter, a special convention complex housed everything comfortably. Nathalie would accompany me there as, to us, San Francisco is a delightful city. Strolling along Fisherman's Wharf and indulging in the plethora of seafoods, with the culinary attractions of the Chinese quarter as an alternative, was always enjoyable and there would also be occasion to visit the famous galleries and museums.

Other visits included the great medical centres of Houston, Yale and Harvard, while visits to Tulane, New Orleans, and to Joe Barr in Boston were also pleasant and instructive experiences. In each of these and several others, one was welcomed but too often had no time for meaningful introduction to local attractions or special features. Typically, one would arrive by air near lunchtime, be well fed, taken to the lecture hall to make one's contribution, before a session of cocktails and dinner. Next morning the programme would be to drive past a few landmarks, such as an art gallery, before catching the 'plane for home. In Dallas, scene of President Kennedy's assassination, a detailed rundown on Lee Harvey Oswald and his murderer, Jack Ruby, was given along the route.

Jorge Mineiro, Professor of Orthopaedics at the University in Lisbon, invited me as his Visiting Professor in 1964. I arranged to go in the summer, which worked out splendidly. We determined Portugal was a desirable family holiday venue and, including the trans-Atlantic flight, would actually cost less than the New England coast. So, through friends of friends, we rented a house at Praia de Luz in the Algarve. Little more than a stone's throw from the sea, it was rambling and spacious, with a magnificent patio. Nathalie engaged two young Portuguese maids to cook and clean. Neither could speak a word of English, but both were willing and helpful. Nathalie and the younger two children moved in for the full three months. Anthony and David each stayed a month, while I spent broken time with them, at the University and also back in New York. It was a magnificent holiday, enjoyed by all of us. We could bathe, walk along the beach, or take a taxi to Lagos to shop and occasionally lunch on good peasant fare at one of the simple posadas. But mostly we enjoyed relaxing and eating on the patio where we grilled fresh sardines on an open barbecue.

The Algarve is pleasantly convenient to travellers, so friends from Britain, America and South Africa broke their journeyings to stay with us for varying periods. Carl and Ruth Coplans from Cape Town spent a couple of weeks. One day I read that an early printing press and two synagogues had been located in nearby Faro. We took a taxi there and managed to trace an elderly man dressed in a semblance of clerical garb, living in what appeared to be a gloomy, roofed alley equipped with a bed, a lamp and a few basic household utensils, but with books and a violin on some shelves. He was the beadle of the departed local congregation. When the Nazis threatened, the entire Jewish population was evacuated, never to return, leaving our old gentleman as sole custodian. Between Carl's French and my smattering of Hebrew, we managed to persuade him to act as our guide.

The older synagogue was in a building hidden behind a mock shopfront camouflaging a back walkway to the place of worship. There was a gallery for women. Men sat in the main room, with an ark at the far end, complete with traditional velvet-embraced scrolls of the Law. The interior was Indescribably dusty and strewn with old prayer books. One was open on the reading desk, also thick with dust. From the ceiling, in close order hung a profusion of oil lamps, apparently the favoured contribution of reverence by congregants. The second synagogue was simpler and even more dilapidated. There were fewer oil lamps evident as it had been used by poorer members of the community. Like the first, its entrance was disguised, a necessary discretion in earlier, less tolerant times. Although we never got to see the original printing press, we left Faro pleased with our day's discoveries.

Another day we motored along the coast to Sagres whence Vasco da Gama had sailed for South Africa in 1486. The Portuguese under Prince Henry the Navigator left a wonderful record of adventurous voyages and discoveries. They were, and still are a great nation. One intrepid sailor was Introduced to me in Lisbon by Alf Katzin. The heavy-set José, whose surname we never discovered, was a fascinating character and an exceptional host. He had led an adventurous life at sea and against the Germans during World War II. We rounded off a charming and Informative day with him with a superb dinner at an august club housed In one of Lisbon's prestigious and handsome buildings.

## Chapter XVI Further Vignettes of America

Through the Einstein we made a number of most interesting friends. Social contacts were pleasant and rewarding, with many Americans showing spontaneous warmth and hospitality. One exception remains in mind. Nathalie and I were perforce associated with a lady who clearly fancied herself above any station. After dining together at the Algonquin, we were to walk to her husband's club. She occupied the stroll with continuous name-dropping and bragging, topping the catalogue with 'You know, my family has been here for six generations'. 'Oh,' I replied facetiously, 'you must be of Indian descent'. She never addressed a polite word to me again.

In a totally different mould was Myer Cohen who, as head of a United Nations agency, was a dignitary. His charming and cultured wife, Elizabeth, was an exceptional lady and soon became a role model for Tessa, who adored her. Their great friends were Walter Gahagen and his wife, members of an old American family who owned large tracts of lake and land in Vermont. Each summer Myer and Elizabeth holidayed in one of the cottages on the estate. One year we were invited to join them for a few days, a splendid interlude of walks, bathes and engrossing conversation. The beauty of the lake, trees and old cottages was a constant source of pleasure. Since seeing the delightful movie of that name, I have thought of the setting as 'On Golden Pond', so reminiscent was it.

Also staying were Walter's sister, Helen Gahagen and her husband, film star Melvyn Douglas, whose movies I always enjoyed. Helen, a fascinating personality, was the woman senator who campaigned against and unfortunately lost her seat to Richard Nixon. One evening, Melvyn, with some bitterness, related the tale of the election. Nixon was supported by the same underhand team who employed similar dirty tactics as in his later fights for the vice presidency and the presidency, and for which he eventually abdicated.

Melvyn seemed intensely interested in fringe medicine and folk remedies, particularly for arthritis. Many Americans had faith in copper bangles for the relief of symptoms. I was restrained in my opinions on the efficacy of these remedies, but was surprised when, a few days after our return to New York, he made an appointment to see me in my rooms at 181 Naat 60th street. An arthritis sufferer himself, he wished to discuss the subject in depth. He was obviously well informed and I enjoyed canvassing the limitations of unscientific customs, speculations and old wives' tales. When I finished, he smiled somewhat sheepishly and pulled up his sleeve. He was wearing a copper bangle which he then blandly presented to me. I have kept it as a nostalgic and rather charming trophy. Sadly, he died recently.

Tall and distinguished, Walter Gahagen had many business interests, but in retirement had gentled his activities. In 1970, an order of chivalry, the Knighthood of St John, was conferred on him. Happily, I was invited to the colourful ceremony which was held in the Museum of Modern Art. The costumes and ritual of due pomp were rich in pageantry. Afterwards we repaired to the Plaza Hotel for an elaborate lunch.

Bill Hyman, a leading attorney in New York, was an unusual character, no mean exponent of 'speaking his mind', but invariably good sense. 'The Magna Carta of Space' was his outstanding production, a highly regarded and respected document considered an authoritative work on suggested laws to govern travel in space. He suffered fools or crooks with vociferous Impatience. Carl Coplans devised a variation of the heelseats which we publicised in medical journals. A certain wealthy individual heard of it and approached us with proposals for marketing. It proved to be an unhappy, but in the end good lesson for the unbusinesslike medical men in the near clutches of an

unscrupulous, devious and dishonest big business man. We were rescued by Bill who literally frightened him off, and in no uncertain terms.

When Bill died, his widow invited me to the funeral parlour where he was lying in state. He was fully dressed and his face had been primped. His friends and acquaintances were milling around, producing a constant buzz of animated conversation on everything from stocks and shares to the latest news—anything but about Bill. To me the ceremony was macabre.

Edward Benenson was a governor of the Einstein. When he discovered that I was familiar with the language of wine, he invited me to a 'parlement' where I met some of the outstanding food and wine experts. Gregory Thomas, standing at least six foot three inches, was President of the New York chapter of the Commanderie de Bordeaux, the great French claret society. Ed, his lieutenant, was himself later to become President. With one or two others, they controlled the Commanderie and the Chevaliers des Tastevins. In due course I was inducted in the Commanderie, the Chevaliers and the Confrerie de la Chaine des Rotisseurs.

Each society had its own carefully tended cellar, rich with rare vintage wines. My favourite was the Commanderie de Bordeaux, but only because I prefer the clarets to the burgundies, though many experts would disagree. Dinners of each society were arranged at carefully selected restaurants with superb chefs, and were notable for good fellowship and sparkling talk. They were for men only and conversation was deliberately limited, with sex, politics and religion taboo. Memories include the spectacular table appointments and the careful blends of food and wine. Before the dinners, a special committee would decide on and first taste the food to be served and sip, and most importantly, 'breathe' the selected wines. At dinner, courses were discussed, with members asked for comments. However, I am afraid mine never merited recording for posterity. They were memorable occasions as the membership included, besides the wine fundis, writers about the best of food and great chefs such as James Beard and Richard de Rochemont. Each of these showed evidence of years of good food and good living, being amiable and rotund. They were expert indeed, with skills beyond my measure. Ed Benenson, for one, had an outstanding knowledge and palate. Every year, between Christmas and New Year, a special 'Langouste' lunch was held at which members of several societies could take part. A usual competition at these was to assess the origin of a 'mystery' wine, the winner receiving a comic prize. At one, the wine reminded me of some tasted in Greece, so put forward 'Eastern Mediterranean'. Ed, who was sitting next to me, said: 'Oh no, this wine comes from the south side of a hill outside Naples'—and he was right! At an unexpected dinner in our home, the boys concocted a soup from several different cans. Ed tasted it, and listed the ingredients fully.

Wine devotees have a protocol of their own. I had not realised the prestige enjoyed by the Commanderie and the Tastevins until invited to a dinner of the New York Physician's Wine Society. When I accepted, their President remarked: 'Of course, you will take precedence and sit at the head of table.' To my amused astonishment he added: 'We have no-one of the rank of a Chevalier de Tastevins.' Now that most of my time is spent in South Africa, I indulge nostalgic reminiscences of my relationships with the great wine societies. I have rejoined the local societies which are pleasant but obviously 'not quite the same'.

Once, Malcolm Forbes, owner/editor of the Forbes Weekly, invited all members of the New York Tastevins to a party on his elaborate yacht moored on the Hudson. His pride and joy, he had just sailed it from Florida, where he lived. After an excellent lunch, he talked of his interest in Africa generally and of South Africa in particular. The problems created by the system of Apartheid saddened him.

Another occasion of like vintage of social, cultural and culinary excellence lingers in pleasant memory. With the Menuhins we attended a superb ballet in the beautiful Harkness Pavilion in Manhattan. The buffet supper that followed was enhanced by the company and conversation.

William Dear, whom I had met as a patient, introduced me to the '21 Club', a famous restaurant in Manhattan. During Prohibition, it had been a speak-easy and the present owners would show with pride the underground premises and devices for closing up and shutting off areas when raided. Enjoying splendid meals, my menu most often grilled ? with a tomato and Bermuda onion salad, I would invariably meet chat to regular diners, who included Gregory Thomas and Henry Ford. The favoured customers had their bottles labelled and stored and in due course I too deposited the odd bottle of vintage wine in their cellars. In fact, I still have some there. Mr Krainer, one of the owners, invited me to spend few days with him in France to visit renowned wine estates and taste the noble vintages, but unfortunately, such trips were not possible at the time.

By the time of World War II, my participation in rugby was limited to refereeing a few service games, but in the United States I was again pleasantly involved. In the 1960's rugby-football, as opposed to American college football, was just beginning to take off. College football, of course, was the major sport of all universities, each of which had a stadium for games which drew crowds of tens of thousands during the season. The proceeds from these games were necessary to support the university's other sporting clubs. Also, the prestige of the college was often dependent on the success of its team. I considered it a handicap that only a small proportion of the student body could take part in football, and even they might be at a loss for a way to maintain interest in exercise in winter. Also, many fit young men had no sports outlet as their involvement as players ceased once they graduated. A number found a solution and enjoyment in rugby-football, played off-season. However, many campuses lacked a suitable field, and team equipment. For games, a field on a neighbouring piece of ground would be vamped or a soccer field where, before a match, the players would themselves put up posts and mark boundaries. Soon keen competitions started between different universities and associated clubs, using gradually acquired and improved equipment.

The 'Old Blues' were originally founded by graduates of Columbia University and I became involved when Anthony played for them. Initial participation in American football at Columbia had been conducted with his usual vigour. One evening, I received a 'phone call from him to say that he had been hurt and, when he moved his neck, felt a shooting pain down the arm. Alarmed, I told him to report immediately to the team doctor, explaining that further injury would be very serious and could even lead to paralysis. He was to interrupt his summer training for a while at least. Donnelly, the football coach, did not accept my verdict. However, I was not going to risk Anthony's future physical well-being, so insisted he come to New York for diagnosis. After examination, I informed him his days of American football were over. Rugby he could play, but no more football. The coach was upset and for a while pestered Anthony and made his life miserable. Some years later I met Donnelly again and told him I had deliberately pulled my son out of his squad because he was in danger of permanent injury. The impertinent reply was 'At Columbia we don't mind if a man is seriously injured because we have such a good insurance policy'. Can you believe it!

However, Anthony switched back to rugby, which did not entail the same type of physical impact. For a tour of Great Britain, the 'Old Blues' chose a team from the playing universities. Anthony made this international team, called the 'All Stars'. I happened to be in England and watched a number of their games, including the 'internationals'. Players with American football experience were fast and very good tacklers, but lacked finesse, especially in not passing the ball forwards. They also found it difficult to adapt to the offside rules. The next year I was elected President of the 'Old Blues' and

later, of the Eastern Rugby Union, i.e. of those teams from the eastern seaboard. I enjoyed my association and made good friends.

Anthony achieved a good degree in economics. We attended his graduation ceremony held in the open air and were surprised when the graduates were not capped individually, but in large groups. By his final year the Vietnam War was at its worst and young American men were being drafted. Anthony volunteered to join on a three year contract. This gave him the option in which arm of the forces to serve. To our amazement, he chose the Marines, and moreover, the infantry the footsloggers. After the routine month of basic training, he was posted to the Officers' Training School at Quantico, headquarters of the Marines just outside Washington DC. He did well there, being co-opted to assist the General Staff officer writing the history of the Marine Corps.

On any free weekends, we would stay at a nearby hotel so his off duty time could be spent together walking, dining or playing golf. To meet with him and his bright young fellow officers were prime occasions. It was amusing when, on mess nights, the very correct junior officer would make a point of introducing 'My father, Brigadier Helfet' to his senior officers—the only post-war military recognition I ever had!

A happy event for the family was his marriage to beautiful Caroline, although, to our great disquiet, he was posted off to Vietnam soon after. That year the rugby-football 'Cherry Blossom Festival' was held in Washington DC. As Chairman of the Eastern Rugby Union, I was to present the prizes and invited my new daughter-in-law to accompany me. I asked my secretary to book two single rooms at the Hey-Adams Hotel opposite the White House, one for Dr Helfet and one for Mrs Helfet. When we arrived, the booking clerk, seeing middle-aged me with an attractive young woman, immediately jumped to the wrong conclusions and said archly: 'I have a rather comfortable double room to show you'. Blushing furiously, I said, 'No, two single rooms, which did not satisfy him. 'Can I give you two interleading rooms then?' 'No,' says I more firmly, 'two singles'. I dared not look at Caroline who was doubled up with laughter at my discomfiture. Incidentally, the festival went off well, with 'Old Blues' Winning the competition!

The attitude of the American public to the Vietnamese War was mixed. Civilians were caught up in the controversies about its justification and I had several vigorous and acrimonious discussions when I found any acquaintance deriding American fighting men or playing down their dangers and discomforts. On one or two occasions I blew my top, but always my antagonist shut up and retracted.

But these were anxious days. Each morning latest reports from the front were published, including names of the units and where they were fighting. I found it a disturbing technique, and dubious for security, but could know daily if Anthony had been involved. He was promoted captain and had to lead search and destroy missions. He was wounded once, luckily not seriously, but had to be air-lifted out of the jungle. Later in the field, he was twice stricken by severe attacks of malaria. On the second occasion he ran a temperature of over 106 degrees. His soldiers were wonderful to him, using the precious water from their bottles to dab his face in an attempt to bring his dangerous temperature down. He was again helicoptered to hospital. Captain Brown, Senior Medical Officer at the Quantico headquarters, kept me informed by telephone. He arranged a full investigation and it was discovered that Anthony had an idiosyncrasy to the routine prevention of malaria. Instead of being protected by the medication for days, he metabolised in a few hours. He was withdrawn from the active fighting zone to a non-malarious area and eventually, to the relief of all of us, transferred to a station in California. There he served as Liaison Officer to an Airforce unit, staying until his three years of service were completed.

When he was due for demobilisation, I flew to California to join him and Caroline for a motoring vacation across the United States. He had a comfortable touring car and we enjoyed the journey, skirting the Grand Canyon and passing through other spots of spectacular beauty. Each night we booked into a pleasant inn. The six days were a chance to catch up on Anthony's news and thoughts and also to become better acquainted with Caroline, who was to enter Columbia University as an undergraduate.

Anthony had been recruited by Dillon Reid, a leading Wall Street finance organisation headed by a previous Secretary of the Treasury, and after arrival in New York they settled into a pleasant apartment on 82nd Street. Unfortunately, between the pressures on him at Dillon Reid and on Caroline at Columbia, they saw less and less of each other, drifting apart until they eventually decided to separate. They had an amicable divorce, but personally I regretted it, for she was a nice girl. After a time at Dillon Reid, he worked for Dean Witter, also on Wall Street, from where he was recruited by Merrill Lynch, with whom he still works as MD of their North-Western Division. Equally happily, with the passage of time, he married his delightful Marje and with her has produced a son and daughter, two of our adored grandchildren. Solid citizens, they live in San Francisco.

After graduation from college, David became an undergraduate in Medicine at Tulane University, where he was in residence. I had received an invitation to the Department of Orthopaedics there, so, for David's first break, Nathalie and I travelled to New Orleans where we spent a pleasant few days. We stayed at the Pontrachaine Hotel owned by a fellow Chevalier de Tastevins from New York, whose pride was a gourmet table. It was great to be with David. The first night we visited one of the famous oyster bars where we each consumed three dozen most delectable Gulf molluscs. Nathalie managed to fit in a leisurely and enjoyable riverboat sail up the Mississippi. One evening, while I was with the Professor, David escorted her to 'Preservation Hall' where jazz was born. In an unadorned hall, furnished only with wooden benches and an overflow of people standing at the back, they listened to the marvellous, unforgettable playing of 'Sweet Emma', an elderly Negro lady seated at the piano, toothless, a flowered straw hat looking as though she regularly slept in it perched on her head. It was extraordinary jazz.

## Chapter XVII Between Two Worlds

America had proved stimulating, constantly interesting, entertaining and overall, productive. The new was a constant preoccupation and my team had soon been imbued with the same spirit, which was gratifying. From colleagues, both at the Einstein and the great variety of institutions I visited by intent or invitation, I had been exposed to ideas and techniques, many of which I adopted and adapted and a few which were of lesser value when compared with the wide range from the world. I indulged in many a useful argument and was delighted on those occasions when mine prevailed. Fortunately I had something to offer. Articles were written as ideas presented themselves.

Some of the ebullient minds were inspiring, several with established reputations were disappointing. Of extraordinary value were international contacts, notably those with Jean Cauchoix in Berck, France and Merle d'Aubigne in Paris, with Jorge Mineiro in Portugal and with participants in a symposium on the Surgery of Rheumatoid Arthritis in Honolulu in 1966. Alas, the Royal Hawaiian Hotel of splendid memory from my Franconia cruise had been condemned to property developers and, while at the Conference, we were witnesses to the change in progress.

I was concerned to find a biochemist of note to join us, either as consultant or as a member of staff. I was put in contact with members of the scientific team at Bethesda, Maryland, the main research establishment of the United States Government, but found that these great scientists were so absorbed in the basics of their craft that they gave no thought to any possible clinical application. I shocked one by pointing out to him the clinical implications of his work, but he reacted indignantly. He was concerned only with the strictly scientific aspects. Sadly, nothing came of this initiative, but we continued with our own excellent researchers, Larry Rosenberg and Charles Weiss and when necessary, consulted with Henry Mankin and his team at Harvard, Boston.

Very different was Theodore Puck, with whom we debated orthopaedic progress achieved by basic research as compared with clinical experience. Puck, Chairman of the outstanding Department of Physics at Denver University, on a visit to New York, consulted me as a patient. We got on well together, more so when we found a common interest in sedate mountaineering.

His department were authorities on abstruse cellular biochemistry while mine was concerned in the wider application of cellular change in joint disorders with a clinical base and special reference to osteoarthritis—obviously allied subjects. He invited me to bring my scientific team to Colorado for a long weekend to compare the stage reached by each from our differing approaches.

For three interesting days, each morning Larry, Charles and I collaborated with Puck and his erudite group to determine areas of agreement and where we still differed, but in the afternoon we downed pens and drove to varying areas in the Rockies from where we would walk at least a mile, including a climb of approximately 1000 feet. Setting off each day from a higher starting point, by the end of the weekend we reached a level of 12 000 feet, all we could manage before stressful panting in the thin air. But the whole experience was refreshing.

Endre Balazs became an exciting research colleague. A brilliant and original mind, he had started to explore the possibilities of Hyaluronic acid in the treatment of osteoarthritis. In his Boston laboratories he was able to produce a pure form which, if injected into arthritic joints, acts as a lubricant, at the same time clearing away impurities and leading to relief of pain—in all, a remarkable product. It is absolutely non-toxic and is harmless to the normal joint. He gave me ampoules for testing in New York, and I was most impressed with the results. Each patient was informed that this was a new product and that initial tests had produced only good results. All were co-operative,

indeed eager for its benefits. Of the first fourteen knees injected, the immediate result in eight was completely beneficial, in four partly beneficial and none were made worse. Comparative injections of normal saline produced largely negative results.

For the next series of tests, the knee was drained of synovial fluid before administering the injections. Following this method, joints rarely showed a recurrence of 'water on the knee' in less than three to four weeks, a vast improvement on previous results. Arthritic hips also benefited from the use of hyaluronic acid.

Pharmacia, a large pharmaceutical company, launched a double-blind trial in Scandinavia, including trials on race horses, with most encouraging preliminary results.

With Endre's concurrence, I contacted a local veterinary surgeon who was in charge of the welfare of several horses suffering from worn, arthritic ankle joints and were no longer able to race. With him, I went down to the stables to treat some magnificent animals, all of which had been put out to stud. I drained the joints and injected the hyaluronic acid. No ill effects were produced in any, but all improved in mobility and obvious comfort. One was so improved that it was retrained and won a race, to everyone's jubilation.

At this time Charles Weiss was in Boston, and I suggested that he should assist Endre with processing the fluid and the test programme, which led to further confirmation of these results. Endre was to accelerate the manufacture and we would expand the programme, hopefully into normal treatment. He then started a commercial association with Pharmacia for the manufacture and use of 'Healon', as it was now named. When the first edition of Disorders of the Knee' was published, I included the results of injections on sixty-two knees.

About this time too, I was contacted by Ron Slee of Myron Medical Products, the firm marketing the heel seats. They had become involved in research of an interesting product, 'Miol'. Supplied as a lotion or an ointment, it was anti-pruritic, anti-inflammatory and bactericidal, but contained no antibiotic or steroid, and was completely safe to use. It had a distinct orthopaedic relationship in that it was particularly useful in the relief of leg ulcers and of chronic itching. I became involved in the trials and was impressed with its effects, preferring to use it in cream form.

Ron Slee suggested I might also be interested in 'Lumbak', a back support of ingenious design for use in motor cars or aeroplanes, as well as regular chairs. With mainly lateral, rather than posterior support, its concept was original. Tests demonstrated its possibilities and I actually made an appointment to discuss it with the Ford Motor Company, but was distracted before our ideas finalised.

At a later stage, Myron sought my advice on an inflatable breast prosthesis to compensate for mastectomy. In all, I had fingers in a number of pies, not all of which pulled out plums.

One invaluable opportunity I did follow up. On a visit to London, C.G. Attenborough, a younger colleague, approached me. He had devised a new way of doing local fusions of the lumbar spine, a subject he knew was of much mutual interest. After discussion he suggested a visit to Hastings where he would demonstrate his operation. Using a relatively small metal spring applied to adjacent laminae or spinous processes, his technique of application was appropriately simple. He had calculated the length of spring necessary to establish, not rigid fusion, but an elastic compression to hold the vertebrae together at more or less the same tension as that provided by the contractions of normal muscle. It had adequate holding power and tension for fixation. As I had always deemed the closest possible simulation of normal muscle movement was the optimal stimulus for healing a

fracture, I was impressed and excited, enjoying the day immensely. I bought some of the springs to take back to New York, where they proved eminently successful. The relatively simple surgery showed excellent results, with minimal post-operative pain. Within days of the operation the patient was completely comfortable and, reinforced by a light corset, able to stand and walk. X-rays soon demonstrated solid local fusion between the two vertebrae, whereas previously, at least three vertebrae would have to be fused to achieve stability. I recalled the first disc removal and fusion I had performed in Cape Town after the war. Plaster of Paris anterior and posterior complete body casts were prepared. Post-operatively the patient was turned twice daily—for five months before he was 'freed' into a corset and allowed up. What a difference!

I described the Attenborough springs and spinal fusion at orthopaedic meetings and eventually in 'Disorders of the Lumbar Spine'.

Another intriguing idea came from Armen Haig, my second in command at Einstein. This was for the treatment of claw toes, with the incidental fortuitous benefit of reducing metatarsalgia pain in the metatarsal area. From a loop round the heel, two extensions of elasticised material led to other loops round the second and fourth toes. The tensions produced in these loops when raising the heel in the act of walking straightened the toes and so relieved the pressure. It worked extremely well and we decided that the department would take out patents and commercialise the idea. This device was later written up in 'Disorders of the Foot'.

Once I had established the validity of the helical idea, it became the basis of much thought, work and experiment. Overall the knee presented particular opportunities and at least twenty-four books and articles on the subject resulted from my decade in America.

I was especially pleased with my discovery that removal of an irritant in the knee, such as a tear in, or segmented meniscus arrested the otherwise inevitably deteriorating osteoarthritis. Simple partial meniscectomy proved highly effective. Likewise, in the hip, correction of a malalignment by subtrochanteric derotation osteotomy arrested the progress of osteoarthritis.

The natural extension of work on the helical principle was to design internal joint prostheses, or implants, and external supports, or braces. I went ahead and devised a helical knee implant. In normal flexion of the knee, the tibia rotates inwards and the femur outwards during extension, with the opposite movements occurring during bending. Therefore these were the movements to reproduce, and once accurately established, the device acquired maximum stability through the whole range of movement.

At the time Victor Frankel was head of the Department of Biomechanics at the University of Cleveland, Ohio. He was a friend of Joseph Milgram whose assistant he had been. I contacted him and outlined my ideas. Impressed, Victor spoke to the head of Zimmer, a major orthopaedic manufacturing company who were intrigued by this innovative idea. They immediately followed it up. Unfortunately, at a later stage, an overeager attorney confused the whole issue and the agreement with Zimmer fell through. Meanwhile, Victor and his team became involved and produced the first experimental prototypes. Eventually the firm of Howmedica produced experimental models and later the first prosthesis. By then based part-time in Cape Town, I continued the work, involving Michael Manley of the Department of Biomechanics at the University there. In a successful first operation, I implanted the prosthesis into a patient at Princess Alice Orthopaedic Hospital in Cape Town. Standard techniques and operating implements were suitable, and so used. The lady into whom the device was inserted is still walking comfortably with it, but I, alas, was at the stage of commuting to the United States and lost control of the experimental work.

Victor's career has continued a splendid course. His talent for organisation and leadership made him the obvious choice to follow Herman Robbins, Joe Milgram's successor, at the Hospital for Joint Diseases. As Chairman of the whole organisation, much appreciated by his fellows, when the Hospital, although still highly regarded clinically, lost many patients who did not wish to visit the deteriorated area bordering on the sorrier parts of Harlem, Victor co-ordinated its move to 17th Street.

By the end of the '60s, plans were afoot to combine the orthopaedic services of the Montefiore Hospitals with those of the Einstein. I was offered the overall chairmanship. This implied responsibility and administration for the orthopaedic care of patients in nine hospitals as well as teaching residents and students. It appealed to me. I would give up private practice except to be available to treat governors or other dignitaries of the two institutions if so requested. A reservation about the volume of work did not detract from the pleasing prospect of an almost full-time academic career, always my desire. We began to plan accordingly.

David had completed a satisfactory two years at Tulane. It was now necessary to choose a clinical school where he could complete his medical degrees. The relative merits of British and American training were once more canvassed. He chose the former. I gave him the option of England, Scotland or South Africa, which last was his choice. He applied to the University of Cape Town and was accepted.

Nathalie with Tessa was to travel with him to South Africa where they would holiday. We had no inkling or presentiment that it would become a major misfortune for her and for the family. She had always enjoyed travelling by sea. They were booked on a Moore-McCormick twelve passenger ship for a voyage calling at different ports and so of indefinite length, but probably about six weeks. We all went down to the New York docks to see them off. The accommodation proved shabby and less comfortable than we had been led to expect. I wanted them to come straight off the ship and consider an alternative route. Nathalie, rather tired, did not feel up to repacking, and insisted she would take things as they came. It was an unfortunate decision. By the time they reached Puerto Rico, the atmosphere deteriorated to the impossible. A grossly fat captain in 'Mutiny in the Bounty' mould was harassing two young ladies on board. Nathalie adopted her usual protective posture, rousing the captain's antagonism. Life became unpleasant. He tried to prevent them 'phoning me when they stopped in San Juan, but by a subterfuge, they managed. I told them Timothy and I would leave to join them immediately, but meanwhile they should contact the company's agent and leave the ship. The latter was most helpful. In crowded San Juan he found them a pleasant seaside hotel. A clean bedroom, hot bath and good breakfast did much to restore their spirits. When we arrived, a few happy days were enjoyed in the delightful resort.

We decided that Nathalie, David and Tessa would now return to South Africa by air instead of by sea. Timothy and I left for Geneva to stay with Alf Katzin, from where I was to meet Maurice Müller in Berne to work on the knee implant. The others would travel via Portugal on a lightly booked Panam flight to Lisbon. On the day of their flight, instead of an announcement of their safe arrival, an unhappy 'phone call came from David.

Some two hours out of Lisbon, the 'plane had been involved in severe high-altitude turbulence over the Atlantic, a relatively newly recognised flying hazard. The mere eighteen passengers aboard were each spread over three seats. Nathalie's safety belt was loosely buckled when the 'plane suddenly dropped violently, then was tossed from side to side. Baggage fell off the racks and in the galley, kitchen utensils burst out of cupboards. Nathalie, entrapped, was thrown forward, backward and sideward with every lurch of the 'plane. Her first concern was for Tessa, who had scraped a shoulder

and David, whose head had dented the luggage rack above his seat, but apart from a slight lump, seemed miraculously unharmed. The other passengers suffered relatively minor injuries. These fears allayed, Nathalie realised she herself was in great pain. Apart from aspirins, little could be done while still in flight.

After the 3.00 a.m. touchdown at Lisbon, she, with David and Tessa, transferred to the Ritz Hotel, where they had transit accommodation arranged. At this stage, an alarmed and disconcerted David contacted me in Geneva.

My friend Jorge Mineiro of Lisbon University was immediately available and started treatment for Nathalie. X-rays showed fractures of two neck vertebrae, a lumbar vertebra and both wrists. Full of anxiety, Timothy and I left Switzerland for Lisbon on the first available flight, to comfort, consult and organise the family's altered arrangements.

The question of hospitalisation in Lisbon arose, but we agreed that it would be better to continue to South Africa. Jorge splinted and plastered Nathalie and, a few days later, she, David and Tessa resumed the sorry flight to Cape Town, where she was hospitalised. For convalescence, colleagues in Cape Town arranged a pleasant rented cottage in Newlands, not far from 'Acorns', and medical and full-time nursing care. I arrived shortly after to find them well cared for, but another grave family decision was necessary.

There was a probable two years of disablement ahead of Nathalie in which she would not be fit to run a family home without full-time help and regular nursing attention. The cost of these in New York would be beyond our means. David was already committed to the University of Cape Town. Timothy was ready for college and Tessa had two further years of schooling. So Timothy, who had displayed an early interest in business, with a childhood talent for entrepreneurship, also applied in Cape Town, registering for three years of economics. Tessa went back to her old school, Herschel, in Kenilworth.

To my annoyance and dismay, the Dean of the Medical School, a contemporary of mine, ruled that David would have to do an extra year. It was quite unwarranted, as I indicated with vigorous acrimony. However, David, completed the additional year, which did him no harm. Indeed, it was to his long-term advantage, for a research project in kinetics resulted in two papers and moreover, added an academic dimension to his clinical inclinations.

It all meant at least two years in Cape Town. If I was to commute from New York at three to six monthly intervals, I could not assume the combined responsibilities of Montefiore-Einstein. I would return to see what I could evolve out of Einstein and private practice, poor compensation for my anticipated full-time academic and clinical orthopaedics. However, needs must when the devil drives. I arranged for bachelor quarters in the Mazer Residence of the Einstein, largely occupied by residents and students.

The serviced faculty apartment comprised a bed-sitting room, bathroom and kitchenette and was adequate. I could have all my meals in the Medical School cafeteria, where the provender was plentiful, but rather monotonous. Delicatessen fare, 'lox' (smoked salmon), salads and fresh crusty bread, was available round the corner. I supplemented with tomatoes and melons. Many meals were at the invitation of friends in Manhattan and at the homes of Faculty members.

Reluctantly, I called in an agent to handle the practical aspects of disposing of the Riverdale house. Of course, no sooner had it been sold, than property prices advanced at speed. Actually, on each

occasion that we moved from a home adorned and warmed by Nathalie's inimitable. homemaking and gardening talents, I have regretted its loss.

As our temporary arrangement became more permanent, we had to decide on a new home. Nathalie was keen to resettle in Cape Town. With very mixed feelings I contemplated re-sinking roots in Cape Town, rather than resume living in New York or some neighbouring part of the United States. But economics, as much as anything else, necessitated our return to South Africa (an ironic echo of my tongue in cheek advice at the Orthopaedic Congress of the English-speaking World in Washington more than a decade earlier).

The return had its positive aspects. Living would be much more tolerable and comfortable for Nathalie. The faithful coloured staff who had worked for us before we left for the States clamoured to come back. In fact, we lost a friend because of it. As soon as Nathalie was discharged from hospital, our pristine cook, Rachel Seveiris, called on her to say she was returning to our employ. Nathalie said: 'You can't do that; we arranged for you to work for our friend, Mrs X, and I can't possibly take you back'. A 'phone call soon after told us that she had given her employers a month's notice. This put us in a difficult position, but we felt obliged to re-employ her. Our friends who had 'inherited' Rachel, considered that we had been unfair and cut off all communication. At time of writing, Rachel still works for us, although now part-time.

When the cottage lease expired, we bought 'Summerhill', nudging the highest point of Bishopscourt, a verdant suburb, contiguous with our beloved Newlands. A view of the southern Peninsula included the shores of False Bay, scene of the 1795 battle when the British defeated the Dutch to capture the Cape. Situated halfway between the Medical School and Muizenberg, early and late sorties to the magnificent beach were frequent.

'Summerhill' became another home delighting the Helfets. We built a generous pool and most early mornings, splashed contentedly. The garden was in excess of an acre, so Nathalie, with green-fingered George Goliath to help, was in her element and soon garnering a variety of flowers, fruits and vegetables.

With David and Timothy in the swing at university, a raised patio was several times the scene of extraordinarily well-behaved parties. When one young man pitched an empty beer can into some bushes, I was impressed to hear him being told in no uncertain terms to retrieve it and deposit it in a bin—an unusual standard of behaviour for students.

For over two years, I commuted between New York and Cape Town. Although I enjoyed the work in the States and the continued association and convivial occasions with hospitable friends, the commuting became particularly trying.

I took six months open-ended leave. I did this with grave reserve and trepidation, for I seemed to be giving up all I had worked for in the past years. Project planning which had all been in my favour had been overturned by the long-term results of Nathalie's accident. My department was flourishing. I had assembled an excellent team and here, at its peak, I was relinquishing the fruits of my labours. The future of Einstein itself was being mapped out. I felt I could not keep them holding the post indefinitely, so regretfully resigned. The title of Professor Emeritus was accorded me. Actually, a new Chairman was not appointed for a number of years, while I have kept a continuing relationship with the Department and especially with the team I created there. Eventually Edward Habermann took over and has done well as Departmental Chief.

I would now attempt to resume practice in Cape Town. Being ambitious, I kept a foothold in New York. With many requests from patients who especially insisted on consulting me and who were prepared for the additional expense, I several times arranged to go over for a spell of three months. If I felt treatment could not be completed within the stipulated period, I would not take on the case.

The first two of these stays worked out well, but the system stuttered later with one patient, with whom of all, I should have wished for success. William Dear and his wife Thelma were close family friends. Already in his university days an exceptional athlete, Will became the Amateur Golf Champion of the United States. By the time I first met him, his knees had started to give way. Old injuries had left him practically crippled, for even walking was painful. Our friendship began after the relatively straightforward operation I had devised to free the joints of obstructions enabled him to walk, and, by using an electric cart, to play his superb golf again. An exceedingly kindly and generous man, he took me to several leading golf clubs of which he was a member, including the prestigious Boltesrol in New Jersey. The Dears lived near Boltesrol and Nathalie and I would be invited to spend a day or weekend with them, with golf as the central attraction—for the men, at any rate.

Will was determined to help my golf along and, with the ex-Professional Open Champion whom he invited, gave me additional coaching. I would flounder my way around the course, but undoubtedly, my play did improve slightly under their watchful eyes and constant instruction. I confess to enjoying the open-air walks in the beautiful surroundings of these remarkable golf courses. There was an occasion when I thought my day had come. Ed Benenson took me to his also well-featured club in Westchester. The first hole was over four hundred yards and I played two remarkable shots with my driver and a three wood to be on the green, then with two putts achieved a bogey. But after the congratulations I suffered severe stage-fright and played very badly for the rest of the round. I needed two extra-strong American cocktails as consolation!

Unfortunately, after several years, Will's knees broke down again. During a three-month stint in New York, I operated on him again. But after a couple of years, his knees once more troubled him. It was an obvious impossibility for me to repeat the operation, so referred him to a colleague for possible further surgery. Subsequently, he had the relatively new knee implant operations which replaced the lining of the joint and these were successful. With both hips and both knee joints replaced, he was a phenomenal athlete. In a way I felt that I had abandoned him, and am sure that he felt the same, for our relationship cooled rapidly and considerably, a source of great regret as the whole family were very fond of both him and Thelma. It is often thus in medicine: after success in treatment, the patient becomes devoted. If the same degree of dramatic results is not sustained, the warm relationship is lost.

Bill and Molly Tucker were among those who made living overseas pleasant. Bill, tall and well-built, in his younger days was a Cambridge rugby Blue and English International. He was also Chairman of the Middlesex County Cricket Club, the 'M.C.C.', heart of the English cricket establishment. Captured during World War II, he was a prisoner of the Germans in France. In due course, he was created a Commander of the Victorian Order and awarded an M.B.E.

When I first met them, the Tuckers lived in an apartment in Grosvenor Square, London, from which they dispensed considerable hospitality. With time, our friendship developed and, when available, Bill would ask me to see patients as his consultant. He practised as a specialist in Physical Medicine, numbering among his patients the Queen Mother and members of the regiment of Guards. In addition, he was busy on the staff of various London hospitals.

He produced several volumes and articles on sports medicine, among them the definitive work *Injury in Sport*. Most of his treatments of athletes and others were based on the philosophy of 'active, alerted posture', on which subject, as its original protagonist, he wrote and spoke frequently. I found it efficacious, so taught it to my staff and patients.

Bill was born in Bermuda, maintaining a seaside home at West Dunes, where he and Molly lived in simple grace. They several times invited me to break my journeys and stay with them. When they came to New York, only ninety minutes by air, they might stay with us in Riverdale. Placed so conveniently between Europe and America, Bermuda is a delightful island. The climate is balmy, the bathing pleasant and the people warm and hospitable. We found interesting a cemetery with South African associations, for Boer prisoners of war were interned in Bermuda and some stayed permanently. These interludes were always a welcome break from the pressures of New York. We would bathe twice a day in the temperate seas and eat health foods of which the Tuckers approved.

During one such visit an absorbing day was spent with General Alexander Hood, then retired and ninety years old, who had been in overall command of the RAMC and who had wished me well when I was demobilised in London. The day passed too swiftly as he let down his sparse hair to relate his version of events and people still vivid in our memories. Interesting reminiscences are the spice of many occasions.

In October 1969, the visit to Bermuda was arranged to coincide with the inaugural international symposium of the Mid-Atlantic Orthopaedic Association, which was to be an annual event. Bill, who was a founder and moving spirit, delegated me to give the opening address. A favourite subject, 'The Arrest of Osteoarthritis in the Hip and Knee', seemed appropriate.

After my return to South Africa in 1972, between periodic visits back to the United States and Britain, an urgent invitation from Bill requested me to do a locum for him in London. He and Molly wanted to spend a vacation in Bermuda and also to attend the American Academy meeting of the year. As consultant, I had seen a number of his patients some short while before and Bill asked, would I perform the operations I had advised, mostly on knee or spine. I agreed willingly and moved into their home in Hamilton Terrace, not far from Lord's cricket ground where, with Bill, I had watched matches from the Long Room, an enjoyable privilege. I operated in an excellent nursing home run by the British equivalent of the American Blue Cross.

Bill had an old-fashioned Bentley, a four and a half litre four-seater, with the open body and high seats which one drove rather proudly. I had long aspired to a Bentley and when invited, was tempted to buy it, but was deterred by the problem of transporting it to South Africa. I still regret that I did not.

Recently I was devastated to receive word that Bill had died. I immediately wrote Molly a letter of heartfelt commiseration, to receive a reply from Bill himself that the 'report of his passing was grossly exaggerated'. Apparently a cousin in Bermuda of the same name had died, hence the confusion. Sadly Molly is now no more, but Bill continues his octogenarian status. It could be said of him that he feels kindness to all and malice to none.

## Chapter XVIII Changing Emphases

Meanwhile, in Cape Town I was developing a productive relationship with successive members of the staff of the university Department of Biomechanics. I worked in turn with Michael Manley, Douglas Stuart and Christopher Vaughan, all of whom lent expert support and became good family friends. It was a disappointment and academic deprivation when each left to improved appointments at American universities.

The work on the knee implant led directly to the devising and manufacture of a knee brace, a much simpler concept. Based on the principle of external rotation of the tibia in extension and internal rotation in flexion, the arrangement worked well immediately and was a definite improvement on existing knee braces. It allowed full, effortless movement and stable support of the knee, its action simulating exactly that of the normal knee while preventing any aberration. The first braces were manufactured by OEC in Great Britain.

Of all the inventions, the design for an elbow prosthesis seemed most obvious. The elbow differs from the knee and hip in that it has separate components, one for the hinge-like ulna to humerus and the other which copes with the rotation of the ulna. Once on the drawing-board, the development was straightforward. By this time David was established in the Orthopaedic Department of Johns Hopkins in Baltimore. Through him I contacted his chief, Andrew Brooker, who promptly decided to endorse the drawings and establish prototypes. Once in production, trials were started which resulted in successful models. The first implants were manufactured by De Puy.

The ankle has always presented difficulties in design and in execution. In tackling this, I worked with Kit Vaughan and Brian Davis, a bright young student doing his Master's thesis. Applying the principle of rotation, we achieved a suitable model. Although not in production, it has promise—and Brian has been awarded his degree.

Working with Kit produced another original device, an inflatable collar, differing from the usual in that it gives support under the chin, rather than round the neck. It is constructed in sections which can be inflated separately and to varying pressures where necessary. The completed device works well.

In all these developments, I consulted also with David and enjoyed the father-son collaboration.

An absorbing interest since the 1950s has been my association with the South African College of Medicine, a body outside politics, concerned only to establish and develop excellence and quality in medical practice and the teaching of medicine for the whole of the country.

Lionel Goldschmidt and A.W. Sichel were the originators and energetic movers of this significant project. I was very pleased when they approached me to join the steering committee. To build up and foster the College became a prime objective.

It was to be a national project, but the key personnel on the committee were Capetonians, viz, both the initiators, A. Tonkin, Frank Forman and T.B. MacMurray not to forget A.J. Helfet!

At the end of the war T.P. MacMurray, my old professor, asked if he could send his son Barry out to South Africa under my care. He had just qualified as an orthopaedic surgeon and I was only too pleased to accede. He was also co-opted onto the committee and in due course, elected registrar.

The steering committee engaged in formulating and mapping the structures and constitution. It was exciting and stimulating. Each member was imbued with the same public-spirited commitment to

progress. Weekly meetings, usually over a dinner hosted by A.W. Sichel and Lionel Goldschmidt, were pleasant occasions, devoid of self-interest, personal rivalries or factiousness. We hoped this positive approach would continue. A regional committee, pervaded by a like spirit, had been formed in the Transvaal. The committee there was chaired by Guy Elliot, with Walter Kark a driving force. Inevitably some provincial rivalry arose and when a couple of years later I wrote the first history of the College, Johannesburg immediately brought out their own parallel version.

At an early meeting I brought up the subject of a library and archives, both essential components of such a college, and was promptly appointed Honorary Librarian and Archivist.

At this stage there was no suggestion of a headquarters, which came much later, with Transvaal collecting a sum of money to build the first base, a handsome set of buildings in Johannesburg. In Cape Town, the College eventually bought a spacious residence in Rondebosch and converted it to their needs. In 1988, the building was renovated and expanded into magnificent premises to cope with all facets of the College.

As soon as I returned from America in 1972, I was asked to resume my interest and activities in the library and archives. Here we collect Curricula Vitae of all members of the College and now have a goodly volume of these and of books of professional interest. So far we display one piece of sculpture—'Tribute to Mobius' by well-wisher Max Policansky—and a number of items and instruments of museum interest.

A story with a moral was told of the senior London surgeon who one morning completed his operating list very competently, removed his gown, shed his gloves, said goodbye to the theatre staff and walked out never to return, saying 'Every surgeon should know when to lay down his scalpel!'. I admired the gesture and determined that in due course I would do the same. By the mid-1970s that time came for me and since then, although I missed operating, resisted the temptation. Sometimes when asked to advise or watch an operation, I was tempted to grab the instruments, feeling that perhaps I could do better. But with the years my resistance improved. After a while I limited my spectating when I realised the younger surgeons were more concerned with my opinion of their skills than with the operation in progress.

Like all young men, I had believed the present would last forever. To my senior perceptions it did not seem long before our children were grown and had spread their living and activities. Timothy and Tessa returned to the States in turn, Timothy successfully to several successive ventures in the commercial world and Tessa, after completing a degree in art at the University of Cape Town, to find work in New York, in Sotheby's print department. She later moved to California as curatrix of the Norton-Simon Museum of Art in Pasadena.

Nathalie and I began to rattle in too many rooms. So in 1975, once more with regrets, we sold a happy home, to move to our present five-roomed apartment in verdant Newlands, which I confess suits us for most of the time.

Our distance from the children was an additional excuse for regular travel to the States. My academic commitments and involvement in a succession of publications, as well as the lure of our many friends in the northern hemisphere, ensured that the Helfets were frequent patrons of the airlines.

An interesting association developed from a visit as the guest of Professor Harlan Amstutz who had asked me to present my work on knees at a conference in Los Angeles. At the time son David was doing an elective there, among others who were promoting Amstutz's joint replacement and, under his deputy, Dr Firer, gaining experience in Sports Medicine. Before the session opened, I was

introduced to a young man from the University of Virginia, Dan Kulund by name, whose paper was to precede mine. In it he described an anatomical peculiarity he had noticed when dissecting knees. Beyond that, I noticed that of all the conference papers, he concentrated only on my contribution. After the session, we lunched and spent the rest of the day together, with him loading me with questions. He had been intrigued by 'Disorders of the Knee' and wished to discuss his observations. Some weeks later, while staying in New York, I received a pleasant invitation from Dr T. Stamp, his professor, inviting me to Charleston and the University of Virginia as Visiting Professor.

When I arrived in Charleston it was snowing heavily. The talks had perforce to be postponed to the following day, but I was billeted at a comfortable inn and enjoyed the unexpectedly extended visit. Charleston, established by the great President Thomas Jefferson, is the capital city of Virginia. The University is named for him and at the end of my talks I was presented with the College tie and an engraved 'Jefferson' bowl.

I encouraged Dan to elaborate his interest in Sports Medicine, and indeed, he became an expert. He eventually published a monograph on the subject, splendidly written, with the first line of the preface a kindly tribute to me.

"The Management of Internal Derangements of the Knee' had been published in 1963 by Lippincotts, the original publishers in the United States of medical books, and was well received. It became a major publication topic, the first of a series, which I was encouraged to repeat by Stuart Freeman, Lippincott's Editor-in-Chief.

In 'Disorders of the Knee', published in 1974, my writings covered the field, but the scope was broadened by inviting colleagues to write chapters of consequence. It was pleasing that whomever I asked to contribute did so without hesitation and in admirable fashion.

Victor Frankel elaborated on the biomechanics of the knee and his chapter was augmented in another by Peter Walker, then at the New York Hospital for Special Surgery, who had a justified reputation as a bio-engineer. Endre Balazs and Charles Weiss wrote on their original work on synovial fluid. Robert Freiburger of Cornell University covered the field of arthrography.

Masaki Watanabe, professor of Orthopaedic Surgery in Tokyo, Japan, had contacted me while on a visit to New York. As a recognised expert, he spoke learnedly on arthroscopy. When asked to contribute he justified and presented the techniques of arthroscopic surgery with simple clarity.

Another South African, John Handelsmann, had been on the staff at Einstein for a short time before becoming Professor of Orthopaedics at the University in Rhode Island. His researches led to considerable knowledge of haemophilic arthritis, which unusual expertise he expressed in a chapter. He has since moved to an appointment at Long Island Jewish.

Traumatic lesions and their rehabilitation were covered by James Nicholas and Joseph Milgram. The former was head of Orthopaedics at Lenox Hill Hospital in New York and we had become easy friends. The latter wrote from his celebrated and vast knowledge of osteochondral fractures of articular surfaces.

Of unusual calibre was Maurice Müller, who became an international leader of Orthopaedics. Operating from Switzerland, he developed the techniques of AO, an excellent system in the operative treatment of fractures and a practice that has become universal. He added a magnificent chapter on these principles of internal fixation.

I invited David Gruebel Lee to join me in producing 'Disorders of the Lumbar Spine', which Lippincotts published in 1978. His wife Lydia edited this and the subsequent volume on the foot, with individual grace.

Among the contributors to the book on the spine were Carl Coplans on Physical Medicine and William Kirkaldy-Willis on spinal stenosis. Bill had been noted for his orthopaedic work in Africa. Translated to the University of Saskatchewan, his work on the spine achieved rapid renown, and fitted in with mine. On meeting during the 1960s, Bill and his wife Betty became instant friends and our relationship was profitable professionally as well as socially. His invitation to be Visiting Professor at Saskatoon appealed and I travelled to Canada to spend a week with them. They were splendid hosts and I enjoyed my visit enormously. Saskatoon in summer presented a vista of endless, rolling, green hills, but treeless.

David Gruebel Lee had introduced me to Hannington Kiff, the anaesthetist to Frimley Park Hospital in Surrey, England. His forte was the modulation of pain, on which he contributed a chapter.

Louis Solomon and Louis Berman, both of the University of the Witwatersrand in South Africa, tackled rheumatic disorders. The former was a leading academic professor of Orthopaedic Surgery, the latter his associate.

I first met George Dommissie during my post-war association with the University of Cape Town. Over the years we became increasingly friendly and maintained a trans-Atlantic correspondence. His researches on the circulation of the spinal cord have met with international recognition. With his Pretoria University associate, Professor R.P. Grabe, he discussed the failures of surgery for lumbar disc disorders.

Michael Devas, a contemporary and good friend from pre-war days in England had recently suffered a prolapsed disc and volunteered to write an unusual chapter on spinal surgery from the patient's point of view—which is perhaps an aspect too many physicians tend to neglect.

For these two publications I meditated and browsed diligently and exhaustively to find apposite aphorisms and found satisfaction in introducing 'Disorders of the Knee' with 'I must believe in order that I may understand' juxtaposed with 'I must understand in order that I may believe', the former from St Anselm in the 11th Century and the latter from Peter Abelard in the 12th. A quote from Michel de Montaigne prefaced 'Disorders of the Lumbar Spine'—'Man in sooth is a marvellous, vain, fickle and unstable subject'.

In 1980, Lippincotts published 'Disorders of the Foot', in the same format as the previous books, with multiple authors. David Gruebel Lee and I shared the general chapters on the function and dysfunctions of the foot, congenital, developmental and acquired deformities and on painful conditions, with separate chapters for the paralysed and swollen foot. Valuable contributors were Ralph Ger, who dealt comprehensively with the clinical anatomy, Michael Manley with biomechanics and John Handelsmann with the causes of club foot. Dan Kulund contributed the 'Foot in Athletics'.

Lipmann Kessel, whose part in the World War II battle of Arnhem and whose work and personality I admired enormously, wrote on his operation for arthroplasty of the forefoot. Excellent were the chapters by W.P.U. Jackson, J.H. Louw and H.S. Myers of the University of Cape Town on effects of the endocrine disorders, such as the diabetic foot, the abnormalities due to acromegaly and the disorders caused by the thyroid.

It was felt that the role of the podiatrist and foot orthotics were important. David Gruebel Lee recommended chiropodists David Holmes and Glen Quittell, whom we approached without subsequent regret. Alan Apley wrote a gracious foreword in his usual conversational and telling style.

The initial publications of 'Internal Derangements of the Knee' and 'Disorders of the Knee' were extended in a second edition, issued in 1982. Watanabe's presentation of arthroscopic surgery was augmented by a brilliant chapter on the subject by Richard O'Connor. I was especially grateful to him as he did this, stricken by cancer, from a sick bed. He died shortly afterwards.

Louis Solomon commented on the vagaries of osteoarthritis and the rheumatoid knee, while the surgery for these conditions was discussed by Ronald Furlong, Edward Habermann and E.L. Trickey of the Royal National Orthopaedic Hospital in London. James Nicholas, Brookes Heywood and Dan Kulund all contributed on one aspect or another of traumatic lesions. Brookes Heywood, who has recently been appointed Professor of Orthopaedics at the University of Cape Town, joined me for the chapter on dislocations of the patella.

A chapter on external fixation about the knee by my son David gave me special pleasure. David had told me about this work, done with his chief, Andrew Brooker. I wrote to Brooker asking if he would cover the subject. He replied graciously that he would be pleased to do so, but in conjunction with David, and generously, that David's name would head the article.

To round off the book, a chapter on tumours of the knee was needed. I was put in touch with Walid Mnymneh of the University of Miami, who immediately responded with a fortunate additional contribution.

A highly decorative Japanese version of the second edition was an unusual bonus. Later there was an Italian translation of 'Disorders of the Lumbar Spine'. It was strange to find my own writings incomprehensible.

To my distress, in 1983 cataracts started forming in both eyes, the left being more troublesome and requiring surgery. Dr W. Stark of Johns Hopkins' Wilmer Ophthalmologic Institute had a major international reputation. He told me I would be hospitalised for no longer than twenty-four hours and would wear an eye shield for three weeks. I duly entered the Institute. It was remarkable! I suffered no pain during an operation under local anaesthetic to remove the cataract and implant an artificial posterior chamber lens, or post-operatively, and have remained comfortable since. The small cataract in my right eye to date has not significantly affected my vision and I leave it respectfully alone!

Life continued serenely, with our journeys to the States and Europe to visit all our children and friends providing much enjoyment. Occasions of joy were contributed by Timothy's marriage to Vanessa and their production of two apples-of-our-eyes granddaughters, and David's marriage to Molly. Timothy, who remains successfully engaged in the world of finance, and his family are happily settled in Los Angeles, while David recently attained the status of associate professor when he was invited to join the staff of the University of Tampa, Florida.

Tessa, on extended sabbatical leave is currently based in Paris, enthusiastically continuing her study and activities in the art milieu there. Anthony and his family in San Francisco provide another loving focus.

In 1987 a series of medical disasters laid me low for some months. At an orthopaedic congress in Cape Town, I tripped down three steps of an escalator and injured a shoulder and a hip. This produced serious side effects, for it probably led to a duodenal ulcer, diagnosed as stress-related,

associated with a copious haemorrhage (eight pints of blood as a transfusion!). Returned home, inadvertently in the shower a tap of scalding water was turned on full and I was badly burnt down my right side. To add to my troubles, I swivelled favouring the susceptible hip, slipped and sustained an intertrochanteric fracture of the right femur, requiring surgery and a return to bed. Progress from shuffling in a walker, through elbow crutches to the now occasional use of a stick in hesitant walking was of necessity slow. The dismal months were brightened by visits from all the children, the attention of friends and catching up on correspondence. A great consolation has been my indulgence in happy reminiscences and the time to produce this memoir. As I recruit my strength and Nathalie contests fragile health, we look forward to expanding our activities once more.

Recently I have been greatly moved by the tributes of colleagues published in a special edition of the American journal *Orthopaedic Review* commemorating my eightieth birthday. Indeed, it was the mooted of this issue and the request of its editor, David Hirsh, for a contribution from me which precipitated first a short memoir of my experiences in World War II and then, at the insistence of family and friends, this expanded account.

It has been impossible to recapture fully a lifetime of manifest good fortune and fellowship. Nor has it been possible to delineate a complete picture, the joys, sadnesses, fulfilments and disappointments without losing balance. At best, therefore, this is a sporadic biography.

To epitomize the happenings of a lifetime has required much searching among the memory banks. In recollection, I have again enjoyed those events which originally occasioned pleasure and have omitted or attempted to deal lightly with life's inevitable griefs and frustrations.

Without doubt I have been a fortunate mortal—in my marriage, in my children and in my friends and colleagues. If I have any regrets, it is in all I have left incomplete or undone and of many missed opportunities. Maximum satisfactions have derived from researches, basic and clinical, which may have burgeoned scientific knowledge, but each successful project has rewarded me by adding to my career and the direction of my life.

The series of accidents brought home to me that we are not fated to enjoy eternal life, but should be content with what a liberal past has bestowed. With Thoreau, I can say 'I never assisted the sun materially in his rising, but doubt not it was of the last importance to be present at it.' Certainly, my presence at the sun's rising has been blessed.

Cape Town 1988

## Appendix CURRICULUM VITAE

Name: Arthur J. Helfet

Home address: 420 Montebello  
Montrose Street  
NEWLANDS  
Cape Town  
7700

Home telephone: 686-8331

Born: Calvinia, Cape, South Africa

Married: 30.3.1939-Nathalie Freeman

Children: Anthony (1943) David (1947)  
Timothy (1949) Tessa (1952)

QUALIFICATIONS: B.Sc. Cape Town, 1929  
M.B., Ch.B. Liverpool, 1932  
M.Ch. (Orth.) Liverpool, 1938  
M.D. Liverpool, 1938  
M.D. New York, 1962  
Licensed by Endorsement to practice Medicine  
in the State of New York. Licence No. 89604  
F.R.C.S. England, 1937  
F.A.C.S., 1964

### ACADEMIC APPOINTMENTS

Robert Gee Fellow in Anatomy, 1934.  
Ridgeway Research Scholar of the University of Liverpool, 1938.  
Moynihan Fellow of the Association of Surgeons of Great Britain and Ireland, 1938.  
Medical Research Council Grants, 1938.  
Hunterian Professor of the Royal College of Surgeons, 1941.  
Director, Department of Orthopaedic Research, University of Cape Town, 1946-1955.  
Hunterian Professor of the Royal College of Surgeons of England, 1958.  
Member of the Royal Society of South Africa, 1956-.  
Senior Part-Time Lecturer in Orthopaedic Surgery, University of Cape Town, and Senior Orthopaedic Surgeon, Groote Schuur Hospital and Princess Alice Orthopaedic Hospital of the University of Cape Town, 1946-1961.  
Member, Court of Examiners of the College of Physicians, Surgeons and Gynaecologists of South Africa, 1959-1961.  
Examiner, Undergraduate and Postgraduate Examination, University of Cape Town, 1946-1961.  
Trinity Lecturer, Nuffield Department of Orthopaedic Surgery, University of Oxford, England, 1958.  
Professor and Chairman, Department of Orthopaedic Surgery, Albert Einstein College of Medicine, New York, 1961-1972.  
Visiting Professor, Department of Orthopaedics, University of Lisbon, August 1964.  
Visiting Professor, Department of Orthopaedics, University of Miami, March 1967.  
Guest Professor, Department of Orthopaedics, University of Saskatchewan, August 1968.  
Director, Research in Osteoarthritis, Department of Orthopaedic Surgery, University of Cape Town, 1971.

Examiner, Fellowship of the College of Surgeons, South Africa, 1971-1973.  
Visiting Professor, Department of Orthopaedics, University of Haifa, March 1978.  
Visiting Professor, Department of Orthopaedics, Hebrew University and Hadassah Medical School, April 1978.  
Professor Emeritus, Department of Orthopaedic Surgery, Albert Einstein College of Medicine, 1975-  
Visiting Professor, Department of Orthopaedics, University of Virginia, March 1980.

#### CLINICAL APPOINTMENTS

Senior Orthopaedic Surgeon, Groote Schuur Hospital and Princess Alice Orthopaedic Hospital, Cape Town.  
Senior Honorary Orthopaedic Surgeon and Chairman, Medical Committee, Maitland Cottage Homes for Crippled Children.  
Orthopaedic Consultant for School for Spastics, Cape Town.  
Chief Assistant, Department of Orthopaedic Surgery, St Thomas' Hospital, London, 1938, 1939.  
Orthopaedic Surgeon to Rowley Bristow Orthopaedic Hospital, Pyrford, Surrey.  
Professor and Director, Department of Orthopaedic Surgery, Bronx Municipal Hospital Centre, New York.  
Consultant, Orthopaedic Surgery, Hospital for Joint Diseases, New York City.  
Orthopaedist in charge of the Albert Einstein Service, Blythedale Children's Hospital, Valhalla, New York.  
Consulting Orthopaedic Surgeon, Montefiore Hospital, Bronx.  
Attending Orthopaedic Surgeon, Doctors Hospital, New York.

#### WAR SERVICE

1938-1939

Capt RAMC (Territorials)

Sept 1939-Nov 1941 Major RAMC - service U.K. and West Africa

1941-1945

Lt. Col. Orthopaedic Adviser West African Command,

Scottish Command and Western Command RAMC

1944-1945

RAMC Orthopaedic Adviser Allied Middle East Forces

April 1948-Sept 1948 First Consulting Orthopaedic Surgeon to all the Medical Services of the State of Israel. Awarded Liberation Medal.

#### MEMBERSHIP OF LEARNED SOCIETIES

Past President of the South African Orthopaedic Association.

Fellow of the British Orthopaedic Association (Senior Fellow 1982).

Fellow of the Association of Surgeons of Great Britain and Ireland.

Fellow of the Royal Society of Medicine.

Fellow of the Royal Society (South Africa).

Member Steering Committee College of Physicians & Surgeons of South Africa, 1954-56.

Member of Council of the College of Physicians, Surgeons and Gynaecologists of South Africa, 1956-1962.

Hon. Librarian and Archivist, the College of Physicians, Surgeons and Gynaecologists of South Africa, 1956-1962.

Honorary Member, Israeli Orthopaedic Association.

Elected Member Medical Society of the County of New York. Life

Member, March 1978-.

Elected Member of the Rudolph Virchow Society.

Member of the American Medical Association.

Senior Member of the Orthopaedic Research Society.

Member of the Bone and Tooth Society.

Appointed Member of the Amputee Service Advisory Committee, Inter-Departmental Health Council, City of New York.

Member of the British Commonwealth Medical Graduates Society of New York.

Member International Society of Orthopaedics and Traumatology. Hon. Archivist and Librarian, The College of Medicine of South Africa, 1982-.

#### BOOKS AND CHAPTERS CONTRIBUTED TO BOOKS

1. Chapter 'Orthopaedic Surgery'. British Encyclopedia of Medical Practice. Progress Volume, Butterworths, London, 1959.
2. The Management of Internal Derangements of the Knee. Lippincotts, Philadelphia, 1963. Pitman's, London, 1964.
3. Re-operative Surgery. Robert E. Rothenberg, Editor. McGraw-Hill Book Company, New York, Toronto, London, 1964. Chapter: Re-operations for Derangements of the Semilunar Cartilages of the Knee.
4. The Concept of Arrest of Osteoarthrosis in the Hip and Knee. Chapter: Recent Advances in Orthopaedics. Editor, A.G. Apley. J & A Churchill Limited, London, 1969.
5. Diagnosis and Management of Internal Derangements of the Knee Joint. A.A.O.S. Instructional Course Lecture. Volume XIX, C.V. Mosby, Co., 1970.
6. Osteoarthritis of the Knee, and its Early Arrest. A.A.O.S. Instructional Course Lecture. Volume XX, C.V. Mosby, Co., 1971.
7. Early Treatment of Osteoarthritis of the Hip Joint, by Intertrochanteric Osteotomy' in Surgery of the Hip Joint. Editor, Raymond G. Tronzo. Lea & Febiger, Philadelphia, 1973.
8. Disorders of the Knee. J.B. Lippincott Co., Philadelphia, 1974. Blackwells, London, 1974.
9. Disorders of the Lumbar Spine, with David Gruebel-Lee. J.B. Lippincott Co., Philadelphia, Blackwells, London, 1977.
10. Disorders of the Foot, with David Gruebel-Lee. J.B. Lippincott Co., Philadelphia and London, 1980.
11. Disorders of the Knee. 2nd Edition. Lippincott, Philadelphia, 1982.
12. Publication of an Italian Edition of Disorders of the Lumbar Spine: Patologia Della Colonna Vertebrale, Verduci Editore, 1979.
13. Publication of a Japanese Edition of Disorders of the Knee, 1986.

#### EDITORIAL

Hon. Editor of the Transactions of College of Physicians, Surgeons and Gynaecologists of South Africa, September 1957-May 1961.

Member Editorial Board, Journal of Bone and Joint Surgery. British Volume, 1954-1957.

Foreign Editor. Postgraduate Medical Journal (London). Member, Section Spinale, Comite' Scientifique, Revue Internationale de Chirurgie Spinale et Nerfs Peripheriques.

#### PUBLICATIONS AND GUEST LECTURES

1. A New Conception of Parathyroid Function. The Treatment of Generalized Fibrocystic and Allied Bone Diseases by Aluminium Acetate. British Journal of Surgery, April 1940.
2. The Treatment of the Soldier's Foot. R.A.M.C. Journal, May 1941.
3. Acute Manifestations of Yaws of Bone and Joint. Journal of Bone and Joint Surgery, October 1944.
4. Orthopaedic Reviews for Bulletin of War Medicine. 1942-1945.
5. A Consideration of Recent Surgery for Osteoarthritis of the Hip Joint. South African Medical Journal, 5 August 1950.
6. Function of the Cruciate Ligaments. Lancet, May 1948.
7. Paget's Disease. South African Medical Journal, 30 August 1952.
8. Spinal Osteotomy. South African Medical Journal, September 1952.

9. A Neurological Cause of Pain Under the Head of the Metatarsal Bone of the Big Toe. *Lancet*, October 1954.
10. Common Disabilities of the Feet. *South African Medical Journal*, June 1955.
11. A New Way of Treating Flat Feet in Children. *Lancet*, 11 February 1956.
12. A Lively Splint for the Flail Hip. *South African Medical Journal*, May 1956.
13. A New Way of Treating Flat Feet in Children. *Triangle*, Volume III, No. 1, March 1957.
14. Coracoid Transplantation of Recurring Dislocation of the Shoulder. *Journal of Bone and Joint Surgery*, British Volume 40-B, No. 2, May 1958.
15. The Mechanism of Derangements of the Medial Meniscus of the Knee. Mechanism, Diagnosis and Consequences. Hunterian Lecture, Royal College of Surgeons of England, 1958.
16. Slipping or Displacement of the Cartilaginous End Plate Simulating Prolapse of a Lumbar Intervertebral Disc. Contribution to the South African Orthopaedic Association, October 1957
17. A New Operation for Un-united Fractures of the Scaphoid. Contributed to the South African Orthopaedic Association, October 1956.
18. A Simple Approach to the Mechanics of Treatment of Scoliosis. (With the description of a Spring Brace by C.W. Coplans, and comments on Thorocoplasty by W.I. Phillips), *Bulletin of Hospital for Joint Diseases*, 1958.
19. Instability of the Lumbar Spine, including the Intervertebral Disc. Report to South African and Israeli Orthopaedic Associations, 1955.
20. Mechanism of Derangements of the Medial Semilunar Cartilages and Their Management. *Journal of Bone and Joint Surgery*, Vol. 41B, May 1959.
21. Instability of the Midcarpal Joint (The Carpal Scaphoid Syndrome). In publication *Journal of Bone and Joint Surgery*.
22. Restoration of Stability of the Knee Joint by Extra-Articular Tendon Transposition. *Bulletin of Hospital for Joint Diseases*, 1960.
23. Surgery of the Arthritic Knee. Contribution to the International Symposium on Surgery in Rheumatoid Arthritis, Vienna, 1963.
24. Surgery of the Rheumatoid Knee. Contributions to a Symposium on Arthritis at Institute Calot, Berck, France, 1963.
25. The Development and Management of Arthritis of the Knee. Guest Lecture, Portuguese Orthopaedic Society, Lisbon, August 1964.
26. Diagnosis of Derangements of the Knee. Guest Lecture at the Alfred I. Du Pont Institute, Wilmington, Delaware, 23 May 1964.
27. Treatment of Deformities and Rigidity in the Rheumatic Knce. Guest Lecture at the Alfred I. Du Pont Institute, Wilmington, Delaware, 23 May 1964.
28. The Treatment of Disorders of the Feet in Cerebral Palsy by Calcaneal Osteotomy. Guest Lecture at the American Academy of Cerebral Palsy, December 1964.
29. Metachromatic Compound Formation in the Study of Pathologic Articular Cartilage. Presented with Dr. L.C. Rosenberg and Dr. David Hamerman, at the Orthopaedic Research Society, 8 January 1965.
30. Internal Derangement of the Knce: Diagnosis and Treatment. Guest Instructional Course Lecture, American Academy of Orthopaedic Surgery, New York, January 1965.
31. The Management of Instability of the Knee. New York Academy, 8 March 1965.
32. Short Trochlear Groove in Recurrent Dislocation of the Knee, with Dr. L. Alaia. New York Academy of Orthopaedic Surgery, 22 April 1963.
33. Disorders of the Superior Tibio-Fibular Joint, with Dr. A. Weisel. New York Academy of Orthopaedic Surgery, May 1964.
34. Cavernous Hemangiomas in Striated Muscle. Report of three cases and Presentation of a simple Diagnostic test, with Dr. J. Chiarenza. New York Academy of Orthopaedic Surgery, 10 May 1965.
35. The Ultrastructure of Normal and Early Osteoarthritic Human Articular Cartilage, with Dr. Charles Weiss. Chicago, Illinois, January 1966.

36. Internal Derangement of the Knee: Diagnosis and Treatment. Guest Instructional Course Lecture. American Academy of Orthopaedic Surgeons, Chicago, 24 January 1966.
37. The Concept of Early Arrest of Arthritis of the Hip and Knee. Guest Lecture at the Philadelphia County, Maryland, New York and Washington Medical Societies, 15 April 1966.
38. Surgery of Arthritis of the Knee. Guest Lecture at the New Jersey Orthopaedic Society, 23 April 1966.
39. The Concept of Early Arrest of Arthritis of the Hip and Knee. Guest Lecture at the International College of Surgeons, Houston, Texas, 3 May 1966.
40. Non-Referred Knee Pain in Osteoarthritis of the Hip. Guest Lecture at SICOT, Paris, France, 7 September 1966.
41. Management of Deformity of the Rheumatoid Knee. Guest Lecture, Pan-Pacific Surgical Association, Honolulu, Hawaii, 22 September 1966.
42. Guest Panelist at Symposium on 'Surgery of Rheumatoid Arthritis', Pan-Pacific Surgical Association, Honolulu, Hawaii, September 1966.
43. Effects of Oxygen Tension on the Periosteum in Fractures, with Dr. Sheldon Manspeizer. New York Academy of Medicine, 9 May 1966.
44. Internal Derangement of the Knce: Diagnosis and Treatment. Guest Lecture, Instructional Course, American Academy of Orthopaedic Surgeons, San Francisco, California, 16 January 1967.
45. Management of Osteoarthritis. Panel Discussion on Knee Problems. American College of Surgeons, Sectional Meeting, New York, 28 February 1967.
46. Moderator for Programme on Knee Injuries, with Drs. O'Donoghue, Pisani and Nicholas. New York Academy of Medicine, 13 March 1967.
47. The Concept of Early Arrest of Osteoarthritis of the Hip and Knee. Miami Orthopaedic Society, Miami, Florida, 22 March 1967.
48. Congenital Dislocation of the Hip in Osteogenesis Imperfecta in Siblings, with Dr. Stephanus N. du Toit. New York Academy of Medicine, 8 May 1967.
49. Internal Derangements of the Knee: Diagnosis and Treatment. Instructional Audio-Visual Lecture, American Academy of Orthopaedic Surgeons, Chicago, Illinois, 22 January 1968.
50. An Ultrastructural Study of Normal Young Adult Human Articular Cartilage, with Dr. Charles Weiss and Dr. Lawrence Rosenberg. *Journal of Bone and Joint Surgery*, V. 50-A, No. 4, June 1968.
51. The Concept of Early Arrest of Osteoarthritis of the Hip and Knee. Guest Lecture, South African Orthopaedic Association, 13 June 1968.
52. Conducted Seminar on the Pathogenesis of Osteoarthritis. University of Colorado, 4 October 1968.
53. Osteoarthritis of the Knee. Guest Lecture, Instructional Course, American Academy of Orthopaedic Surgeons, Americana Hotel, New York, 20 January 1969.
54. Concept of Arrest of Osteoarthritis in the Hip and Knee. Bermuda Symposium, October 1969.
55. Guest Lecture, International Seminar in Treatment of Osteoarthritis. Rheumatism Society of the District of Columbia, November 1969.
56. Guest Lecture, Arrest of Primary and Secondary Osteoarthritis. South African Rheumatism Society, March 1970.
57. Diagnosis and Management of Internal Derangements of the Knee Joints. Guest Instructional Course Lecture, American Academy of Orthopaedic Surgeons, 1970.
58. Moderator, Symposium on the Hip Joint. American Academy of Orthopaedic Surgeons, Philadelphia, October 1970.
59. Moderator, American Fracture Association Meeting, New York, 1970.
60. Derangements of the Midcarpal Joint and Un-United Fractures of the Carpal Scaphoid. Guest Lecture, American Fracture Association, October 1970.
61. Headache from Less Usual Disorders of the Cervical Spine. Headache Symposium, University of the Witwatersrand, 1973.

62. Considerations of the 'Arrest' of Osteoarthritis of the Hip and Knee. South African Medical Journal, October 1973.
63. Chondromatosis of Joints, with Alan Shippel, MD. In publication, South African Medical Journal.
64. Compression of Surgical Fusion of the Spine. In publication, South African Medical Journal.
65. Derangements of the Cervical Spine. Headache Symposium. University of the Witwatersrand, 1977.
66. Guest Lecturer, Department of Orthopaedic Surgery, University of the Witwatersrand, 1976.
67. Visiting Professor, Mount Sinai Department of Orthopaedics, Miami, 1977.
68. Joint Chairman, International Symposium on Chronic Neuromuscular Disease, Hebrew University, Jerusalem, 1977.
69. Panelist, International Symposium on Joint Replacement, Mount Sinai Medical Center, Miami, 1978.
70. Joint Chairman, International Symposium on Disorders of the Hip. University of Haifa, 1978.
71. Guest Lecturer, Hebrew University, Jerusalem: Disorders of Epiphyseal Growth, May 1978.
72. Guest Speaker, Orthopaedic Grand Rounds, U.C.L.A: Clinical Biomechanics of Knee Implants and Braces, 23 September 1978.
73. A Day with Michael Freeman and Arthur Helfet on Knee Prosthesis, Mount Sinai Hospital, Miami, November 1978.
74. The Biomechanics of Prosthesis and Braces for the Knee. Clinical Lecture at the Annual Meeting of the South African Orthopaedic Association, 1979.
75. The Helical Principle in Replacements for Knee, Elbow and Ankle, with Dr. C.L. Vaughan. Exhibit at the Seventh Combined Meeting of the Orthopaedic Associations of the English-Speaking World, Cape Town, 1982.
76. The Helicoid Knee Brace, Injury. The British Journal of Accident Surgery, Vol. 15, No. 3, May 1983.
77. Guest of Associazione Ortopedico-Traumatologica, Naples.  
(i) Segmental Intervertebral Instability. (ii) Slipped Lumbar Epiphyseal Endplate, March 1984.
78. Guest of the Twentieth Anniversary Celebrations, St Thomas -Einstein Connection, September 1984.
79. The Helicoid Knee Brace, with Dr. C.L. Vaughan, S.A. Orthonews, Vol. 2, No. 2, December 1985.
80. Segmental intervertebral instability. Rivista internazionale di Chirurgia vertebrale e dei nervi periferici, Vol 1, No. 1, 1986.
81. A Vignette of Personal Experiences in World War II. Orthopaedic Review, Vol. XVII, No. 4, April 1988. (See Special Honour)

#### DEVELOPMENT OF JOINT REPLACEMENTS

1. Helicoid Knee Prosthesis with V. Frankel, PhD. MD. Manufactured by Howmedica.
2. Helicoid Elbow Prosthesis - with D. Stuart. Manufactured by De Puy
3. Helicoid Ankle Prosthesis with C. Vaughan, PhD. Prototype.

#### BIOMECHANICAL DEVICES

1. Corrective Heelseat for Treatment of Flat and Strained Feet.
2. Torsion Spring Insole for Feet-with C. Coplans.
3. Toe-Strates for Claw Toes and Metatarsalgia with A. Haig, MD.
4. Helicoid Action Knee Brace for Sports Injuries and Post-Traumatic Osteoarthritis. Manufactured by OEC.
5. Chin-Neck Support with C. Vaughan, PhD.

#### INTERESTS AND HOBBIES

##### SPORT

Rugby-football - Colours, later Captain, Liverpool University Rugby Club. Waterloo, Lancashire County and U.A.U. (Combined British Universities)

Tennis, Golf, Mountain Climbing Reading, Stamp Collecting

MOTTO

'Never do today what someone else can do tomorrow!'

SPECIAL HONOUR

Orthopaedic Review, Vol. XVII, No. 4, April 1988: Special Issue Dedicated to Arthur J. Helfet, MD.