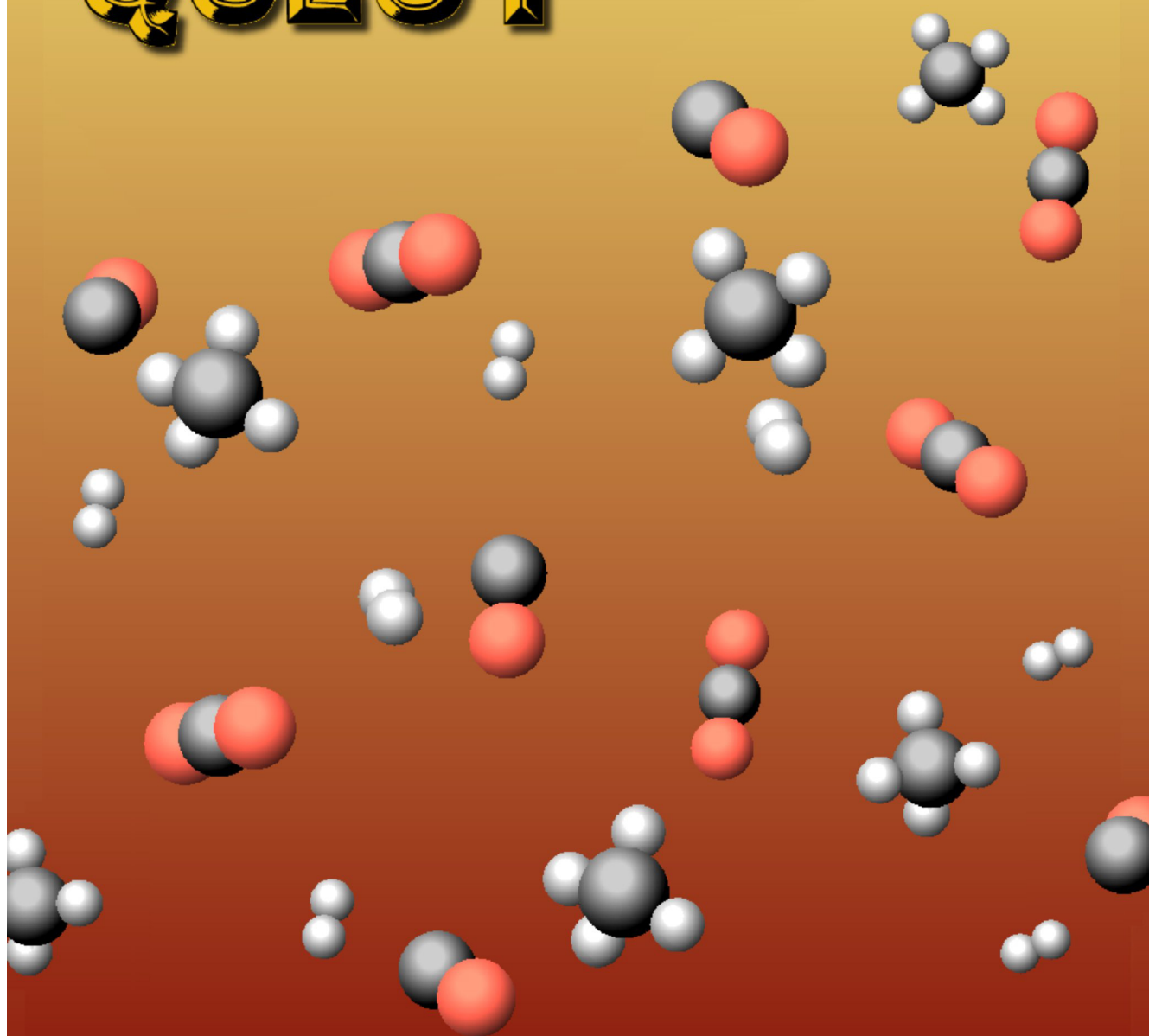


MADELEINE'S QUEST



JULIEN EVANS

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Author's Notes

The chemistry and physics details in the story are generally accurate, although the descriptions of the results of laboratory variations in reaction parameters such as pressure, temperature and catalyst performance may differ from reality. When heated to high temperature in the presence of a suitable catalyst, carbon dioxide (CO_2) will react with methane (CH_4) to produce syngas (carbon monoxide (CO) and hydrogen (H_2)). The image on the cover of this book includes pictorial representations of the molecules of these substances. Currently (2015) the concentration of carbon dioxide in the atmosphere is approximately 400 parts per million. In this edition other chemical and physical factors involved in the removal of carbon dioxide are included.

The Christ the Saviour cathedral in Moscow, destroyed by Stalin, was eventually rebuilt after the collapse of the USSR

The acronym QFE stands for surface atmospheric pressure at an airport, expressed in millibars. QNH refers to atmospheric pressure at sea level

Thanks are due to those contributors to the PPRuNe website who offered useful information concerning the operation of the BOAC B707

Author's Notes (contd)

All the characters in this story are fictitious, with the following exceptions:

Gerard d'Erlanger, a director of the pre-war British Airways, who helped to set up the Air Transport Auxiliary

Amy Johnson, pioneer aviatrix, who died while serving with the ATA

Jacqueline Cochran, American pioneer aviatrix

Ranald Porteous, Chief Test Pilot at Auster Aircraft Ltd

Freddie Laker, proprietor of Laker Airways

Barbara Jane Harrison, BOAC stewardess who died trying to save the lives of her passengers during the accident to Boeing 707 G-ARWE at London Heathrow airport on 8 April 1968

CHAPTER 1

"Thank you for gracing us with your presence, Luke." Professor Madeleine Maunsell didn't bother to hide her sarcasm. "Your monthly report seems to have gone astray as well."

The post grad researcher and the chemistry scientist looked at each other, Luke Stirling's normally self-assured (some would say smug) expression temporarily expunged by his mentor's scorn. Joe Curtis, Luke's lab-coated colleague, was avoiding the embarrassment by absently fiddling with a cathode ray tube control panel on the workbench apparatus a few feet away.

"Sorry, Professor. My car wouldn't start so I had to walk."

"There are buses. You come in from Abingdon, don't you?"

"Sunningwell. Sometimes walking's quicker than waiting for a bus. I got a lift for the last bit."

Madeleine glanced at the clock on the wall then back at the errant researcher.

She shook her head. "An hour late, and not for the first time recently."

"Sorry, Professor."

"Report?"

"Done the rough version. I'll type it tonight and bring the fair copy tomorrow."

"No, you'll do it today. Handwritten, if necessary. In blood, if necessary. On my desk, three o'clock at the latest."

"Okay."

"You did some scans of the nickel, didn't you? Are we still on nickel or did we decide to change?"

"No, it's still nickel. You said don't change the catalyst while we're still varying surface characteristics. Then we'll try ruthenium—that's what you suggested."

"Right. What did the scans show? We're on Steady State, aren't we? Was there any carbon poisoning?"

Luke looked across at Joe, and raised his eyebrows.

"We don't think so, Professor," said Joe, taking the question. "Based on yield rates anyhow. We think the SEM piccies confirm that. The resolution's quite good."

"It would be good to know it's serving its purpose," sighed Madeleine. The new Scanning Electron Microscope bought from Minnesota Research Inc had eaten significantly into the Department's 1967 budget and July was still a fortnight away.

The scientist turned again to Luke.

"Will there be scans attached to your report?"

"Yes, Professor."

"Good."

Madeleine turned to leave but was intercepted by Xiu Ying Song, another of the post grad students working in the lab. Daughter of a Hong Kong Chinese father and a Scottish mother, she was happy that everyone anglicised her first name to "Susan". She had heard that Luke sometimes referred to her as "Ying Tong" when talking about her to other people but she was not offended. She knew he was not a malicious character, even if his sense of tact was noticeable by its absence. It was all the fault of the radio comedy group calling themselves "The Goons". Their "Ying Tong Song" had been a popular ditty a decade previously.

"Excuse me, Professor."

"Yes, Susan?"

"We want to increase the temperature another twenty degrees. Is that okay? We want to see if the conversion rate gradient changes. We're think we're on a plateau now."

"Where are you now, temp wise?"

"Nine fifty Kelvin."

"What about safety regs?"

"Mr Syerman says we can go up to ten twenty with the current protection. Any higher and we'd have to put a screen in."

"Pressure still one bar?"

"One point three."

"Okay. Does it affect what James is doing?"

"No, Professor. The UV chamber is okay up to ten seventy. Mr Syerman checked with the manufacturer."

Madeleine smiled at her young researcher. "That's fine, Susan." She looked across the lab to the workbench Xiu Ying shared with James Ibsley.

"Another absentee?"

Xiu Ying followed her glance.

"James has gone out to . . . to . . ."

"Buy doughnuts?" offered Madeleine with raised eyebrows.

Xiu Ying blushed but did not respond.

"We take turns, Professor," came Luke's voice from the other side of the lab. "The bakery's just over the road, as you know. You have to go early or they're all gone. Jim'll be back in two shakes."

The chemistry professor shook her head. "What sort of set-up am I running here? Half my researchers missing half the time."

"A happy one, Professor," called Luke. "Mid-morning doughnuts keep our morale high."

"Not to mention our calorie intake," laughed Joe Curtis.

Madeleine smiled. "They are nice doughnuts, I'll give you that."

"I can nip over and get you one," offered Luke, seeking atonement for his late arrival.

"Thank you, Luke, I'll give it a miss this time. Besides, I don't want to drag you away from writing your report, knowing how much you enjoy doing them."

"My favourite activity."

"Three o'clock."

"Should be able to manage—"

"Without fail."

"Yes, Professor."

A final glance round her fiefdom, then Madeleine walked out into the corridor, heading for her office a few doors down. Seconds later James Ibsley came into the lab carrying the day's doughnut supply in a paper bag, slightly out of breath as he had raced from the bakery and come up the stairs rather than wait for the lift.

"We were lucky," said James in his antipodean twang. "They only had a few left."

"Madam Methane was here a moment ago, asking where you were."

James wrinkled his brow. "Surely she knows about doughnut patrol by now."

"You know what she's like when she's in a mood," said Joe. "She's already had a go at The Duke."

"What for?"

"Couldn't get my stupid car going," said Luke. "Needs a new battery."

"Well, you will drive a Dagenham Dustbin," said James.

"Excuse me. My Ford Prefect is the pride of British engineering . . . well, it used to be, anyhow."

The discussion about Luke's suspect mode of transport petered out and the researchers returned to their respective tasks.

Laboratory 2C was ensconced on the second floor within the Oxford University Organic Chemistry Gas Research Faculty, located in the city centre just across from New College, on the other side of

Holywell Street. The entrance to the faculty could be found in Jowett Walk.

The main apparatus in Lab 2C was a complex arrangement of tubes, retorts and cables adorning a large cylindrical chamber set horizontally on the long workbench where Xiu Ying and James Ibsley were stationed. Several gas cylinders populated the floor space adjacent to the bench, black for carbon dioxide and orange for methane.

On the opposite side of the lab sat the less bulky kit used by Luke and Joe, two nondescript grey metal cabinets the size of television sets connected by rubber tubes to other gas cylinders and by electrical cables to a pair of cathode ray tube monitors. In a separate area stood several microscopes and a set of electric balance scales. On one of the mysterious grey cabinets was sellotaped a photo of film star Catherine Deneuve torn from a newspaper, while the other sported a similar image of Kathy Kirby, the pop singer. The two items of apparatus were Thermal Conductivity Detectors, also known as katharometers and the photos served the purpose of differentiating between them. Thus the post grads referred to the left TCD as "Deneuve" while its sister was "Kirby".

For their joint PhD thesis, Luke and Joe had agreed on the title "Methods for Assessing and Observing the Effect of Catalytic Variations on the Reformation of Methane by Carbon Dioxide". Within three years, if all went to plan, they would be able to style themselves Doctor Stirling and Doctor Curtis.

By contrast, Xiu Ying and James Ibsley were working on "Comparison of Steady State and

Intermittent Periodic Gas Flows on the Reformation of Methane by Carbon Dioxide". Like their colleagues, the two researchers would attain Doctor of Philosophy status if the project was completed successfully.

Joe Curtis had been a student at Trinity, his performance during his exams earning him a well deserved First Class degree in chemistry, with Honours. His colleague Luke was a graduate of Cambridge. After his Finals, Luke was borderline First-Upper Second. A viva went his way when the assessment board grilled him on Gibbs Free Energy, one of the subjects he had by good fortune chosen to revise thoroughly. He was invited by Professor Maunsell into her team because at the interview she had been impressed with his knowledge of splitting of d-orbital energy levels in crystal fields. The tiny hint of smugness she was prepared to overlook.

Participating in the same graduation ceremony as Joe Curtis the previous summer, Xiu Ying was another Oxford chemistry graduate with First Class Honours. Now the two of them were friends rather than the mere acquaintances who had attended the same organic chemistry lectures.

James Ibsley had graduated from Auckland University, New Zealand. Research opportunities being somewhat limited in his homeland, James had looked further afield. Besides Oxford, interesting offers came from two American Universities, both of which tempted him with bigger grants and better fringe benefits. But his New Zealand girlfriend had landed a job as a dancer in "You Must Be Joking!", a successful London West End musical, and James

decided to let his heart rule his head. The girlfriend lived in a flat in Fulham with two fellow performers and James spent as much time with her as he could.

The project the four young researchers were devoting their efforts to was the brainchild of Professor Maunsell, who was renowned in scientific circles for her work on how valence electrons in transition metal catalysts affected organic chemistry processes. In her filing cabinet at home were documents congratulating her on the distinctions she had achieved during her academic career. Unlike some other recipients of these prestigious awards, Madeleine felt no need to parade her certificates in frames on the walls of her house or her office.

Besides overseeing various research projects, more mundane tasks for Madeleine included lectures and tutorials for undergraduate chemistry students at the University. Both Xiu Ying Song and Joe Curtis had benefitted from the esoteric erudition of the lady who was now their personal mentor.

The aims of the project in Lab 2C were simple. Firstly, the idea was to find the best method of forcing methane to react with carbon dioxide to generate carbon monoxide and hydrogen. The second part of the project was to determine whether the method could be scaled up to reduce the large quantities of carbon dioxide escaping to the atmosphere from burning fossil fuels, with the resulting products used in other industrial processes. The clear benefit would be a reduction in the millions of tonnes of carbon dioxide released into the atmosphere every year by the world's power stations. The apparatus in Lab 2C

allowed the researchers to adjust and measure variables affecting the reactive process, including temperature, pressure, electromagnetic radiation and catalysts.

"Madam Methane" was the more polite nickname by which the researchers referred to their mentor. Talking to his mates in the pub after a few bevvies, Luke would sometimes come out with "Mrs Cowfart", even though it had been pointed out to him many times that methane gas from livestock emanated primarily from the other end of the animal. But Luke acknowledged to anyone who would listen to his slurred opinions that the professor was "a great lady who would have been really fanciable twenty years ago."

* * * * *

Luke's mentor entered her office, sat at her desk and kicked off her shoes. She wondered whether she had been too grumpy with the youngsters. They weren't a bad bunch. Luke could be irritating at times but the four of them approached their tasks with enthusiasm. And Luke occasionally sparkled with a touch of genius. Occasionally his insight into d-orbital chemistry matched her own. The Duke, they called him. He wasn't a bad lad really.

Through the open windows wafted a gentle summer breeze carrying the shouts of students wandering along Jowett Walk two storeys below. Demob happy, thought Madeleine. The exams were over and the boys and girls who had endured them

were celebrating accordingly. Within a week the city's population would dramatically dwindle as the students went home for the vacation. Madeleine would sometimes admit to her friends that these days she preferred the quieter Oxford of summer. Must be old age! In less than five years time she would reluctantly arrive at her half century.

"Can I get you anything?" Madeleine's secretary put her head round the door. "You look like you could use a cup of tea."

"Tea . . ." smiled the professor. "Man's greatest invention. Thanks, Verity. I wouldn't say no."

The secretary wrinkled her nose. "No, Prosecco. That wins the prize. Tea comes a close second though."

Madeleine laughed. "You're twenty years younger than me! You'll be a tea jenny one day!"

Verity disappeared and Madeleine sat back in her chair, thoughtful for a moment. Her eyes strayed to the picture frame on her desk, which held three photos. In the first her brother Nigel was sitting in the captain's seat of a parked Boeing 707, twisting round to grin at the camera. Outside the cockpit could be seen the tail of another 707 in BOAC livery. The photo below was of a group of young women in dark military uniform standing in front of a Spitfire. Madeleine was near the centre of the group.

The colour photo alongside the other two featured Madeleine and her parents, all grinning. It had been taken at an award ceremony. The certificate she was holding had just been presented to her by the President of the Royal Society.

Among the papers on the professor's desk was the letter that had arrived that morning. She picked it up with a sigh. She'd already read it twice.

CHAPTER 2

**Science Research Council,
22, Whitehall,
London SW1.**

**Tel: 01-944 4073 (3 lines)
Telegram: "Sciresco, London"
Telex: 827742**

June 21st, 1967

Our ref: JD/MM

Prof. M. Maunsell,
Organic Chemistry Gas Research Faculty,
University of Oxford,
Jowett Walk,
Oxford.

Dear Professor Maunsell,

I refer to our recent telephone conversation regarding future funding of the Methane Reformation Project. Since then the S.R.C. has had further discussions with Sir Melvyn Hocklan, the Chairman of the Allocation of Resources Committee at the Ministry of Technology. The upshot of the discussions is that funding for the M.R. Project is still under review, but it is more likely than not

that the Committee will decide that funding will be discontinued at the end of this calendar year. The decision will be made not later than September 30th.

As the S.R.C. General Project Manager I am sorry to have to bring you these bad tidings. As you probably know, the Chancellor of the Exchequer has impressed upon all public sector departments the need to find economies where possible and this stricture has been applied to the S.R.C. In the case of M.R. Sir Melvyn mentioned several areas of concern, which he will include in a formal communication to me and which of course I shall forward to you as soon as I receive it. Some of the points raised by the Committee are set out herewith.

Firstly, it is noted that the Reformation Process is endothermic and requires temperatures in the region of 650 degrees Celsius before significant yields are obtained. If the energy required is furnished by the burning of fossil fuels then the overall reduction in CO₂ emissions is significantly reduced, and may even be negative, in which case the benefits are restricted to the uses that can be made of the carbon monoxide and hydrogen (syngas) generated. As you know, these chemicals can be manufactured industrially by processes that are not expensive. If the syngas is used as a fuel then again one of the combustion products will be CO₂.

Secondly, it is noted that currently the atmosphere contains 320 parts per million (ppm) of CO₂, averaged over the whole planet. The mechanism by which solar radiation reradiated from the earth's surface increases vibrational and rotational motion in the molecules of the gas by I.R. absorption and the ensuing transfer of enthalpy to other atmospheric gases will be known to you. It has been estimated that the physical properties of the atmosphere and

meteorological parameters would not be significantly altered by re-radiation of I.R. by CO₂ until the concentration of the gas reached levels of approximately 400 ppm. Using current data, this level of concentration is unlikely to be reached within the next hundred years, by which time it is likely that alternatives to fossil fuels will have been developed.

Thirdly, your research deals primarily with the reaction between pure CO₂ and methane. Industrially the CO₂ would need to be removed from the other combustion products of fossil fuels before the reformation process can be applied. You mention membrane filtration or centrifugal apparatus as possible methods but do not furnish details thereof. Even after the concentration of the carbon dioxide the residual nitrogen in the exhaust gases will at high temperatures react with methane to produce other compounds, some of which may be harmful. You will appreciate that this would be a significant factor in any industrial process.

As you know, the current Chairman was appointed some time after the M.R. Project funding agreement was reached. In my opinion the previous incumbent was impressed with your presentation when you originally applied for funding. Perhaps a personal interview with you might persuade the current Chairman--and indeed the whole Committee--to revisit the decision to withdraw funding if that becomes their position. If you would like me to arrange this please write or phone--

"Tea for the lady."

Verity had come back in. She put the cup and saucer on Madeleine's desk, noting that the professor was still holding the letter.

"What's going to happen, Maddie?"

The professor dropped the letter back on her desk.
"I wish I knew."

"The Faculty wouldn't get rid of staff, would it, if they cancelled MR?"

"No, definitely not." Madeleine smiled. "Your job's safe, Verity. As long as I have any say in the matter, anyway. We're doing other things as well, don't forget."

"That's a comfort to hear."

"And I still have spotty undergraduates to indoctrinate with the creed of organic chemistry."

"But MR was your baby, wasn't it?"

"Wrong tense, Verity! *Is* my baby, if you please! It's not dead yet."

"Sorry!"

"It's the four post grads I feel sorry for. If we lose MR then we'd have to send them packing. The SRC grants are funding them. They'd have to find something else for their PhDs and someone else to fund them."

"That would be a shame. They're a nice lot. Even Luke when he's behaving himself."

"Well, I'm not giving in yet." Madeleine picked up the letter again. "John Davis has told me to go and nag the committee. It's worth a shot."

"You show 'em, Professor!"

"Strike while the iron's hot, eh? Verity, will you call Mr Davis and fix an appointment? The number's on this letter. Let me check my diary and see if there's a suitable—"

The phone rang in Verity's office next door. She pressed a switch on the intercom box on the professor's desk and picked up the receiver.

"Professor Maunsell's office. Who's calling, please?" She covered the mouthpiece and said quietly, "Prudence".

Madeleine held out her hand to take the receiver, releasing her secretary with a nod.

"Dizzy! How the devil are you?"

Verity gave her boss a smile and left the office.

"Bearing up," came the lilting female voice in the receiver. "What about you?"

"Fighting Whitehall bureaucrats," said Madeleine ruefully.

"And winning, I hope."

"Too soon to say, Dizz."

"Are you still good for Saturday?"

"Should be. Remind me what the plan is."

"Subject to weather we'll head for Sandown. If it's too crosswindy there we'll make it Bembridge."

"If it's Bembridge we could have lunch at the Crab and Lobster."

"Of course."

"Is Pam coming?"

"She says yes."

"What time for departure?"

"I'll do the preps myself. If you and Pammy roll up at Booker at, say, ten thirty, we should get airborne about eleven."

"Flight time?"

"Forty minutes with zero wind."

"Sounds OK."

Both Prudence Dismore-Whyte and Parminder Chopra had been wartime colleagues of Madeleine Maunsell and both of them could be seen in the Spitfire photo on Madeleine's desk. The ladies in the picture were all members of the Air Transport Auxiliary group, set up by airline director Gerard d'Erlanger in 1939 as an organisation of non-combatant pilots whose task was to ferry military aircraft from their places of manufacture to their operational bases. It would not be true to say that the females in the ATA came from all walks of life. The upper classes and aristocracy were well represented and a few had been presented to King George VI as debutantes before the exigencies of war brought an end to the ritual of the "coming out" ceremonies. The impecunious and those lacking good connections were generally not to be found amongst the ATA pilots of either sex. Many of them had paid for their own expensive training before the war started.

Lying just to the west of Maidenhead in Berkshire, White Waltham airfield was the ATA's main base. The feathers of the genteel British pilots stationed there had been ruffled somewhat by the arrival of the less-retiring American female cohort, led by the indomitable Jacqueline Cochran. It took a while for the native pilots to establish a rapport with their transatlantic colleagues. As the organisation grew so pilots arrived from the British colonies and indeed from many nations outside the Empire.

Many firm friendships were established among the White Waltham pilots, deriving partly from common interests and background and partly from the need for

mutual support during their arduous and often dangerous work. Few of the ATA pilots had been trained in instrument flying or use of radio and their deadliest enemy was the fickle British weather. In 1941 pioneer aviatrix Amy Johnson got lost in bad weather while ferrying a transport from Blackpool to Oxford and was drowned after bailing out over the Thames Estuary. A temporary gloom settled on White Waltham when the news came through, but soon the sadness was dismissed with a metaphorical shrug and a laconic "too bad—let's get on with the job".

Madeleine's two closest friends were typical of the disparate group of fliers. Prudence Dismore-Whyte, known to everyone as "Dizzy", came from a well-to-do family who owned farmland in Derbyshire's Peak District. In her teenaged youth she had been a champion speed and figure skater who was expected to represent Great Britain in the 1940 Winter Olympics, had the war not intervened. Prudence's first serious boyfriend was a fellow athlete whom she had met while skiing in Kitzbühel. William had a pilot's licence and—more impressively—his own Miles Falcon, a sleek monoplane. Prudence needed no persuading to take up his offer of a joyride and even before they had landed she knew that flying was the thing for her. Her parents did not discourage her and her father offered to pay for lessons, although he drew the line at advancing funds so she could buy her own machine.

Soon Prudence had qualified for her own licence and after building up experience on cross-country flights she found employment as an instructor at

Stapleford Tawney, an airfield in Essex. William entered his Falcon for an air race and Prudence was all set to be his copilot. But she was unwell on the day the race started and William found a replacement. On the first take-off the Falcon was seen to enter a very tight turn. Suddenly its nose dropped and it fell to the ground, bursting into flame on impact. Both pilots perished. The watching experts considered that William had pulled too hard on the stick and stalled the wings under excessive 'g' loading. At the outbreak of war Prudence was still getting over her grief. Thinking that some sort of positive activity would help to restore her frame of mind she applied to join the ATA and was accepted.

Completing the trio of female pilot friends based at White Waltham was Parminder Chopra. Parminder's father was a wealthy Indian businessman who had owned a franchise selling imported Vauxhall cars in Bombay. His eldest daughter learned to drive a car at the age of 14, which made her father very proud. But pride gave way to doubt when Parminder announced two years later that she wanted to learn to fly. Manoj Chopra told his daughter that flying was not the sort of activity a young girl of good caste should get involved with. But Parminder's strength of character was a match for her father's and she soloed in a De Havilland Moth before her eighteenth birthday. Her father's pride was restored and indeed reinforced the day she took him on a pleasure flight from the local airfield at Juhu. From the spectators' enclosure her mother watched the event apprehensively and offered

a silent prayer of gratitude when the little biplane landed safely.

Parminder learned of the existence of the ATA through her aviation contacts and persuaded her parents to let her go to England to join the Empire war effort. She easily passed the skill test designed to filter out those not up to the job and eventually found herself ensconced at White Waltham, where the general discrimination against female pilots was for her compounded by her dark complexion and foreign name. No wilting flower, she either ignored the barbs or retaliated with the wit for which she soon became well known. To make things easier for herself and her hosts she adopted the name "Pamela".

Of the three White Waltham friends only Prudence had followed a career in aviation after the war. She resumed instructing, now at Booker airfield, near High Wycombe, and then progressed to instructing instructors. Skilled at aerobatics, she was often hired for stunt flying scenes in films and television programmes. Parminder had held a Private Pilot's Licence for a few years but had then let it lapse as other interests and raising a family took up her time and resources. Madeleine of course went back to the academic career that the war had interrupted.

Parminder was the only one of the three who had married. She had first met her future husband during a spell of duty at the ATA ferry pool at Hamble airfield, where he was an operations officer. Ignoring racist comments and criticism from his colleagues, Rick Collins started to take the Indian girl sailing whenever she had free days at Hamble and love had

blossomed. Now Mr and Mrs Collins owned an office cleaning business in Aylesbury. Parminder's father offered to help pay for enrolment of their three children at a good English public school but she had courteously declined, remembering the snobbery which had sometimes tainted the atmosphere at White Waltham. The local school was the best place for the kids to meet normal people, she told her father.

* * * * *

The planned trip to the Isle of Wight followed the pattern that had been established not long after the war. Every few weeks Prudence would hire one of the Booker planes for the day and the three friends would fly to another airfield for an extended lunch and catch up. In the single-engined Piper Cherokee they now used Prudence would sit in the copilot's right seat so that Parminder could take the controls for the outbound flight and Madeleine for the return, or vice versa. The only difference between these outings and similar friends' lunches all over the country was that no alcohol was consumed. All three had witnessed events during the war when pilots under the influence had embarrassed themselves. Or worse.

Old habits die hard. Like most pilots (and ex-pilots), Parminder and Madeleine were both intensely self-critical and intensely competitive. Sometimes these attributes mutated into parody. The unspoken challenge was: who could do the smoothest landing?

"Nice landing, Pam."

"No, it was hopeless. I should cut off my hands."

"Nice landing, Maddie."

"Pathetic. Even worse than my usual crashes."

"Okay, Maddie," the professor now heard in the phone receiver. "See you on Saturday."

"Thunder, lightning and rain."

"Hurly-burly."

The snippets from Shakespeare's Macbeth were Parminder's invention as a sign-off amongst the friends between themselves after a White Waltham wag had dubbed them the Three Witches.

Barely had Madeleine replaced the receiver when the intercom buzzed again.

"I've got John Davis on the line, Maddie. He wants to arrange a date with you to talk about funding."

"Put him through, please, Verity."

CHAPTER 3

Nigel Nixon swung his maroon Triumph Vitesse convertible off the A4 just west of Maidenhead and headed towards Pinkneys Green. With the car's soft top retracted, the pilot's light brown hair rippled in the warm slipstream. Ray-Ban sunglasses shielded his eyes from the fierce July sun. After half a mile he turned right again into the driveway of a large Edwardian building. Partially obscured by ivy on one wall was a sign saying Fearnville Nursing Home for the Elderly.

Having parked the car, Nigel made his way indoors and stopped at the reception desk where a matronly figure was seated apparently tackling the crossword in a newspaper.

"Hello, Mary," grinned the pilot, removing his sunglasses. "How is she today?"

The receptionist looked up and peered over her reading glasses at the visitor. "Not too bad, Mr Nixon.

A bit grumpy, but not more than usual. The fine weather's helped a bit. She's in the garden."

"No problems recently?"

Mrs Shrigley sighed. "There was an escape attempt a week or so ago."

"Oh dear, not again."

"We're used to it. She's not the only offender. Luckily our security doors stop them in their tracks."

"Is she lucid today?"

"Seems to be. Is Professor Maunsell coming in?"

The pilot looked at his watch. "Yes, should be here soon."

"Why don't you go through, Mr Nixon—"

"Nigel."

"Yes. I'll bring a nice cup of tea out for you, and one for Dorothy too. Would you like a chocolate biscuit?"

"Thank you, Mary."

Dorothy Nixon's wheelchair was facing the sun but the Fearnville staff had thoughtfully erected parasols over the heads of those residents who preferred to sit in the shade, including Nigel's mother. There were a dozen or so residents in the garden and one or two of the nursing staff fussing around them, efficient in their crisp, light blue uniforms.

"Hello, Mum," said the pilot, pecking Dorothy on the cheek.

"You're late," came the muted reply. The old lady did not turn her head to look at her son.

"No, I'm not," countered Nigel. "It's ten thirty. We always come between ten and eleven. You know that."

"Well, nobody told me."

Nigel grabbed a nearby chair and positioned it in front of his mother to bring himself into her line of sight. Now she fixed him with gimlet eyes.

"Where's Madeleine?"

"She'll be here soon, Mum."

"She cares even less about me than you do."

"That's not true, Mum."

"Yes it is. She's only your half-sister, you know. Have I told you that before?"

"Mum, I've known that for thirty years."

"She's the child of your father's tart. That's why she doesn't care about me."

"That's nonsense, Mum, and you know it. She does care about you even though she's not your child. You should be grateful for the help she gives us. There's no obligation. She does it out of the goodness of her heart."

A snort of dissent from Dorothy.

"And," continued her son, "if you don't treat her more respectfully she won't come and visit you any more."

"As if I cared."

Nigel sighed. They had been through this exchange, or variations of it, many times before. Sometimes he was the baddie and sometimes it was Madeleine. The pilot and his sister knew it was pointless trying to defend themselves when Dorothy was in this sort of mood.

Nigel forced his face into a smile. "So, what's new? Are you enjoying the nice weather?"

"It's too hot for me."

The pilot looked at his watch again. It would be easier when his sister showed up and shared the load. Neither of them liked solo visits and standard procedure was for the two of them to meet at Fearnville and spend an hour or so with Nigel's mother. Occasionally they summoned up the fortitude to have lunch with her, trying to ignore the barbs and criticisms. Because Nigel's rest days varied from week to week the easiest procedure was for the chemistry professor to align her availability with Nigel's when possible. The siblings made sure that Dorothy saw the two of them on average once per week.

Fearnville had been chosen because it was roughly halfway between Nigel's house in Epsom and Madeleine's in Woodstock, a few miles northwest of Oxford, and because the staff were trained in dealing with recalcitrant elderly residents. Dorothy had divorced Henry Maunsell, her first husband, around the time of Madeleine's birth. Her second husband had died two years ago and the widowed Dorothy became used to living alone and fending for herself, with help from Nigel and Madeleine when circumstances dictated. But a year after her husband's death she had had a minor stroke which impaired her mobility and, more significantly, degraded her mental faculties. She became forgetful and sometimes confused. Madeleine arranged for carers to visit Dorothy's house to prepare meals and help her with washing and bathing and domestic duties but Dorothy's progressively irascible behaviour

led to the carers withdrawing their services, citing their client's rudeness and lack of co-operation.

When discussing his mother Nigel and Madeleine would always come to the same conclusion. They had to cut her a bit of slack because she was getting old and old people sometimes went strange. And because she never used to be as difficult as she was now, which might be the result of the stroke. And because, when all was said and done, she was Nigel's mother.

Sometimes brother and sister would comment on the irony of the situation. Dorothy had granted her son Power of Attorney to help her manage her affairs but had then objected when he used those powers to sell her house in order to pay the care home fees, which depleted her assets at the horrendous rate of £48 per week. Her occupational and state pensions met only a small fraction of the cost. So this vast torrent of cash was paying to keep Dorothy in an institution which she hated. Well, perhaps hatred was too strong a word. Dislike ranging from mild to intense was probably a more accurate assessment. An unspoken worry was what would happen if Dorothy's funds ran out before she shuffled off her mortal coil. Enquiries indicated that state provision would be nowhere near as bountiful. At 78 years of age it could be that there were several years of life left in her yet. Another irony—what was the point of longevity if she was getting more and more miserable as time went by?

Today's routine would be different for Nigel. After his duty was done he would follow his sister's car northwest along the A423 to Oxford rather than

homewards. But as they approached the city centre he would take the A34 ring road round the city and continue northwards towards the airfield at Kidlington, midway between Oxford and Woodstock. There was a vague plan that he might drop in at Madeleine's later on for a cup of tea if she was home early from the lab. On the other hand if they managed to do all their catching up while they were at Fearnville he might head for home after Kidlington.

"Here's your tea, Dot," came a female voice. A nurse was walking towards them carefully balancing two teacups. Nigel took them from her with a smile and placed them on the little table beside his mother's wheelchair.

"I'm not Dot, I'm Dorothy," said Nigel's mother with a scowl. "How many times do I have to tell you?"

"Sorry, I forgot!"

Another of his mother's whims, thought Nigel. Most of the time she was quite happy with "Dot" but occasionally the grumpy circuits would cut in and she would object. Nigel mouthed his own apology to the nurse, who just shrugged with a wry smile.

"Oh, your sister phoned," said the nurse now. "She can't make it today. Can you phone her back? You can use the phone in reception if you want."

"I'll do it now," said Nigel.

"Are you going?" asked Dorothy. "You've only just got here."

"No, I'm going to phone Maddie. She can't get here today."

"Why not?"

"I don't know, Mum. That's why I've got to phone her. To find out."

Nigel followed the nurse back indoors, grateful for a temporary respite from his mother's scorn but dreading the prospect of having to deal with her thereafter without support until he could decently get away.

"I'm sorry, Nige. It's a mess here," were his sister's words when he got through. "What state is she in?"

"Her usual miserable self. You're in the dog house for going AWOL."

"Bugger! We've got a bunch of Russians chemists here looking at our set up. Prof Henstridge was supposed to be showing them around but he's off sick so I'm filling in. Are you staying at Fearnville for lunch?"

"Not if I can get away with it. I'm supposed to be going to Kidlington this afternoon so I've got a real excuse if I need it. I'd prefer to have lunch there."

"Do you want to meet later?"

"Oxford or Woodstock?"

"Probably Oxford. I'll be in the lab till about six, catching up on stuff I would have done earlier. Is that too late?"

"Okay. These Kidlington sermons usually take a couple of hours. I should be free about four."

"Alright, come to the lab when you've finished. We could have dinner if you want."

"I'll think about it. I'll check with Jackie. Not sure if she's got a plan for tonight."

"Well, good luck anyway."

"With the Kidlington Kids or with my mother?"

A laugh down the line. "Both."

"Twenty pimply cadets are a lot easier to handle than you-know-who."

"I don't doubt it."

The conversation over, Nigel went back to the garden with heavy heart. He was intercepted by the carer who had brought them tea.

"She's fallen asleep. Do you want me to wake her?"

The pilot thought for a moment. He was tempted to scarper but he knew that when she woke up Dorothy would give the Fearnville staff hell for letting him go. He sighed.

"Yes, that's probably for the best. She'll only take it out on you lot if I do a runner."

"You're very kind. Let's do it together then."

* * * * *

Hooray! Nigel rejoined the A423 and put his foot down. The Vitesse responded with a satisfying roar of engine.

Hooray! DCO, as they used to say in the Air Force. Duty Carried Out. He'd managed to endure an hour and a quarter with The Misery and now his mood lifted at the thought that the rest of his day would be more pleasurable. In around an hour if the traffic wasn't too bad he would arrive at Kidlington airfield, where he would be addressing a group of cadets training to be airline pilots.

The airfield's catering facilities were adequate rather than epicurean but it would be nice to have a

spot of lunch with a few of the instructors, one or two of whom he knew from his Air Force days.

The Kids were actually post graduate university students who had successfully passed the rigorous selection procedure for sponsored flying training by the two state airlines, British European Airways and British Overseas Airways Corporation. The training to airline pilot standard took approximately twelve months, after which they would convert onto their first airliner type as junior copilots.

Nigel was one of the captains who volunteered for these lecture duties. The idea was to give the cadets an insight into how their careers would progress after qualifying and to answer any questions they might throw at him. So this particular afternoon he might be describing the set-up by which they would eventually be pounding the circuit in a BOAC Boeing 707 at Prestwick airport at the same time as his sister was entertaining her Russian visitors.

The Kidlington Kids were not short on self-motivation. The young men knew they were lucky to have been selected and they applied themselves with vigour to their chosen profession. The course was an intensive mix of practical flying and ground subjects and the standards demanded were high. Around a fifth of the cadets would be chopped during the course for failing to make the grade. Similar courses were run at Hamble, on the south coast, the same airfield from which First Officer Madeleine Maunsell and her chums delivered warplanes to their operational bases a quarter of a century previously.

Nearly there. As Nigel turned into the airfield entrance he noted a Twin Comanche climbing away sluggishly with noticeable sideslip. Obviously a practice engine failure on take-off. He could imagine the instructor's exhortations to his student. *Keep it straight, laddie! Watch your airspeed! Identify the dead engine!*

CHAPTER 4

The "Trout" was fortunate in that the mass exodus of students for the summer vacation was partly offset by increased tourist numbers. Some of the pub's customers turned up after visiting the nearby city of Oxford and some dropped in on their way to Blenheim Palace, a few miles to the north.

On this July evening there were a few young people supping their drinks at outside tables alongside the weir interrupting the flow of the River Thames but none were undergrads. At one table sat half a dozen pilot cadets from Kidlington discussing the relative merits of England cricketers Basil D'Oliveira and Geoffrey Boycott. Two more cadets, their training sponsored by Olympic Airways, were chatting in Greek.

At another table sat Luke Stirling, Joe Curtis, Xiu Ying Song and Gillian Bradshaw, Luke's girlfriend. The mood was sombre and no words had been

spoken since Joe's remark, "Not looking too good then."

Gill was a biology student who had just sat her finals. In a week or so Harold MacMillan, the Chancellor of Oxford University, would present her with her degree, an upper second. Two months from now she would start gainful employment with a pharmaceutical firm in Bristol, where her parents lived. They were pleased that their daughter had acquitted herself well at university and that they would now see more of her, but less than thrilled when she told them that at weekends she would be driving to Oxford to stay with her boyfriend. Nor were they impressed when she announced her intention to join the Labour Party, with the ultimate ambition of getting herself elected as an MP. On the other hand they liked Luke, who would before too long become Dr Stirling. He had been going out with Gill for three years and seemed to genuinely care for her. As yet Mr and Mrs Bradshaw were unaware of the calamity that might befall their daughter's boyfriend. Luke and his fellow researchers had only just discovered the grim news themselves and the pub meet was to discuss whether there was anything they could do to avert disaster.

Now Xiu Ying restarted the discussion. "Well, the Prof said there was a faint chance we could carry on."

"She didn't tell us what 'faint' meant, though," said Joe.

"Well, she said she was going to see the people in London who make these decisions, didn't she," said

Luke. "Perhaps we should offer to go with her, to back her up."

"I'd go along with that," said Joe.

"I don't know what I'd do if the project gets wound up," said Xiu Ying. A sad smile settled on her lips. "Perhaps I should swap my chemistry degree for a law degree. Then I could go and work for my father in Hong Kong."

"It won't be the end of the world," said Luke. "We've all got good degrees. If the worst comes to the worst we could find research projects in the States. They're crying out for Oxbridge graduates over there. Look at Jimmy—he was offered a place at MIT, wasn't he?"

Joe nodded. "And Berkeley. But he graduated from Auckland."

"Same thing. They'd snap us up."

"I'm not sure I want to live in the States," said Gill quietly.

"Look, we're jumping the gun on this," sighed Luke. "Mrs Cowfart might be able to persuade the men with the money bags to keep it coming."

"Isn't your boyfriend American, Suzie?" asked Joe.

"Yes, from Missouri."

"Post grad here isn't he?"

"Yes, history of languages."

"Is he going home after he gets his PhD?"

"Probably."

"What about you? Will you go with him?"

Xiu Ying sighed. "I don't know."

"Jimmy'll never leave the UK," said Luke. "Not while his bird is prancing round on a stage in London."

"The main question is—are we wasting our time, anyway," said Joe. "I mean, who gives a toss about CO₂ in the atmosphere? If it was really important there'd be loads of other people looking into it besides us. The Prof seems fixated on it and I love the work we're doing but—" Joe's comment petered out in a shrug.

"I like it 'cos it's an intellectual challenge," said Xiu Ying, "but you have to ask yourself if there's any practical value."

"But that's true for loads of research projects," offered Luke. "Nothing wrong with that. Sometimes the benefits of research aren't appreciated until some time afterwards."

"That's where the Americans do better than us," said Xiu Ying. "They've got a more long term outlook. My boyfriend says the British won't put money into a project unless there's a return on investment in five minutes."

"So who's funding your boyfriend's research?" asked Joe.

"The language faculty at St Louis University."

"Wonder if they'd send over a few dollars for a Brit project reforming methane with CO₂," joked Luke.

"Well, I like your idea of offering to support the Prof when she goes to see the SRC," said Joe.

"Who are they?" asked Gill.

"Science Research Council. All our dosh comes from them."

The tranquillity of the warm summer evening was mildly disturbed by the gentle buzz of an aircraft passing overhead. The single-engined trainer was

heading north, towards the airfield at Kidlington. None of the methane group paid any attention. By contrast all eight of the cadet pilots looked up. A discussion started as to whether the plane was positioning for a straight in on zero three or left base for two seven. The conversation in Greek at the adjoining table was perhaps the two Olympic cadets asking themselves the same question.

Xiu Ying turned her head, half-listening to the pilots. A thought had been triggered.

"Didn't the Prof use to fly planes in the war?" she wondered now.

"That's right," said Luke. "There's a photo on her desk. They took planes to their bases from the factories or something like that. According to the RSM they flew all sorts—fighters and bombers and everything else."

"Regimental Sergeant Major" William Syerman was the Safety Officer at Gas Research. The humorous tag came from his ex-military background. Eight years of army service as an explosives expert and bomb disposal officer had started during the war and culminated in his promotion to Warrant Officer in the Devonshire Regiment. His expertise in handling hazardous materials qualified him more than adequately for the post of Safety Officer in the laboratory. Luke and James took great delight in taunting him with unmilitary behaviour just to hear him bellow his opprobrium. Disregarding the students' intellectual prowess, the RSM would chastise them as if they were dim-witted schoolchildren.

"She never married, did she, the Prof?" asked Xiu Ying now.

"Don't think so," said Joe. "I heard somewhere that she had a boyfriend during the war but he got killed."

"Yeah, I heard something like that," added Luke. "Or maybe she's a lesbian. She lives with another woman, doesn't she?"

"She doesn't look like a lesbian, though," said Joe.

"So what's a lesbian supposed to look like?" asked Gill.

"I dunno . . . big jaw . . . moustache . . ."

"She's not a bad looker," said Luke, "for someone pushing fifty."

"She's got more brains than you," said Gill, disapproval in her tone.

"Debatable," said Luke playfully. "I had to correct her on the ruthenium d-orbital energy levels, remember."

"She's a world expert on transition metal catalysts, mate," said Joe, "as well you know. You don't even come close."

"So why did she go from flying planes to organic chemistry?" asked Xiu Ying.

"The RSM told me her brother is an airline pilot," said Luke. "Perhaps it was a family thing. The Flying Cowfarts."

"I think our big problem is endothermicity," said Joe, continuing the trend of non sequiturs. "If we can reduce temp and boost electromag input the process would be more efficient, specially if we use solar photo-voltaic."

"PV costs a fortune, though," said Luke. "Even if we can zap more CO₂ that way. You don't get enough UV from solar, we all know that. And the power for your UV generator will push out CO₂ somewhere along the line."

"Aren't we switching to ruthenium soon?" asked Xiu Ying.

"Yep. Madame Methane says we can do it any time we want. Personally I don't think it'll do much better than nickel." Luke put his tongue in his cheek. "I had to explain to her that the electron flux won't be high enough—"

"You prat!" laughed Joe, flicking a beer mat at his fellow researcher. "That's what she told you!"

"So," said Xiu Ying, "what will the Prof say to the SRC guys if they ask her where the improvements are coming from?"

"I dunno," said Luke. "Maybe if she walked in wearing a see-through blouse and no bra and a mini-skirt and black fishnet tights—"

Gill leant forward to cover Luke's mouth with her hand. "You're right, Joe," she said with a laugh. "He is a prat!"

CHAPTER 5

From a distance they were a lonely speck in a vast panorama of tranquil sea and cloudless sky, a dark blue and silver glint hovering six miles above the ocean's smooth surface under the late morning sun blazing down almost directly above them.

Close up the speck grew into a sleek Boeing 707-436 arrowing north-eastwards through the Pacific skies at 82 per cent of the speed of sound, equivalent to 550 miles per hour. Since the jet airliner's take-off from Honolulu two hours earlier the fiery combustion chambers in its four Rolls-Royce Conway engines had already converted more than 12 tons of kerosene into carbon dioxide and water vapour. In the exhaust gases streaming from the engines the water vapour froze instantly into ice crystals to form the dazzling white contrails marking the airliner's progress through the cold upper atmosphere. Although cynics had it that the Conway was merely a device for turning fuel directly into smoke and noise—with a little residual

thrust—the British bypass engine would in fact pull any aircraft it was attached to through the sky while burning fewer pounds of fuel per mile than the older turbojets.

On the 707's swept back fin the golden Speedbird logo confirmed the owner of this technical marvel as the British Overseas Airways Corporation. The forward fuselage bore the four-letter BOAC acronym in the same gold leaf.

Closer still, an observer peering in through the cockpit windows would note five men comfortably ensconced inside. In the forward left seat Captain Nigel Nixon was munching a smoked salmon sandwich, his gaze casually sweeping the skies outside, with occasional glances at the instrument panel in front of him. On his lap was a folded copy of the *Hawaiian Chronicle* newspaper, on top of which lay the Voyage Report the pilot had been adding entries to.

The BOAC Operations Manual had no instructions regarding extraneous reading matter in the cockpit. Some captains forbade any such material, which made for long hours of tedium when normal conversation had exhausted the range of topics the crew members might want to bring up. Nigel's approach was more lenient. Reading papers or magazines or books was permitted between top of climb and top of descent, with his prior permission. A front seat pilot could not avail himself of this privilege if his colleague's seat was vacant, and Nigel was fastidious in applying his own rule to himself. Thus, when Senior First Officer Rodney Smith had gone

back to the navigator's station, his captain had duly put down the paper he had been reading.

Rodney was now standing by the table at the navigator's station where Second Officer John Cooper was seated with pencil and ruler in his hands. Between the captain's seat and the navigator's, First Officer Mike Archer dozed in the observer's seat.

"Too easy, isn't it?" Rodney said to John. "When the Loran's working well, I mean. What do you reckon for a track error?"

The younger man positioned the ruler on the chart taped to the table.

"Four miles right."

"Accuracy?"

"About the same."

"Wind component?"

"Plus eighteen . . . seven better than forecast."

"So . . . next ETA?"

"Er . . . " John looked down at his log. " . . . two minutes ahead of plan."

"What shall we tell the captain?"

"Alter heading one degree left?" suggested John tentatively.

"He'll give you a funny look if you say that," laughed Senior Engineer Officer Frank Armitage at the flight engineer's panel on their right. "He'll think you're taking the piss."

"What do you mean?" asked the youngest crew member.

"Tell him to go five left then four right." It was an old gag and Frank quickly apologised for inflicting it on them.

"So no change, then," said John, working out what was being suggested.

"Yeah," said Rodney, "tell him the error and new ETA but tell him to maintain heading."

"Okay."

"No . . . tell you what . . . Frank, will you tell Nigel? John and I will Up Periscope and take a sun line. Good practice for him."

The flight was outside VHF radio communications range and so the crew had removed their headsets for comfort. If Oceanic Control wanted to talk to them they would hear the Selcal alert tone from the high frequency receiver. For normal conversation the crewmen had to raise their voices slightly above the rush of slipstream past the windows.

When Second Officer John Cooper wasn't immersed in his work he would reflect on how well life had turned out for him. This was the first time he'd ever been outside the UK. Two years previously he had left school, aged eighteen, to start his flying course at Hamble, his only previous experience a few trips in a glider with the Combined Cadet Force at school. Now he held a commercial pilot's licence, with instrument rating, and was calculating the position of a Boeing 707 carrying one hundred and twelve fare-paying passengers from Honolulu to Los Angeles. In First Class, charming all who spoke to her, was famous Hollywood film actress Nell O'Neill. And it was up to John to tell the captain what heading to set on the autopilot to make sure that Nell and the other hundred and eleven arrived safely in LA.

Actually, as John well appreciated, final responsibility for navigation rested with Rodney, who was training the newcomer in various techniques. Overall the trip would last two weeks. London Heathrow to New York Kennedy (two night stopover), Kennedy to LA (two night stopover), LA to Honolulu (three nights), then back home on the same routing. A Sydney-based crew had taken over the outbound aircraft and another Sydney crew had brought 707 Foxtrot Delta into Honolulu, where Captain Nixon and his crew had boarded.

John was not allowed to fly the jetliner himself, nor even to touch the controls. The closest he had come to achieving the ultimate goal was when Captain Nixon had allowed him once or twice to sit in the copilot's seat and monitor what the autopilot was doing during the cruise.

Whenever John and his chums languishing at the bottom of the seniority list asked about likely dates for starting their conversion courses the responses and rumours were so wild in their variation as to be meaningless. No matter. Patience was the key. Training for the Flight Navigator Licence was interesting enough. And the chaps he was crewed up with for his first trip seemed like a good bunch. No one had told him off when he shot the wrong star on the periscope sextant during the night flight from LA to Honolulu and found the cocked hat he drew on the chart where the position lines intersected was ninety-two miles wide. Mortified by his error he expected a torrent of negative judgement from the others. Ninety-two miles! How could he have made such a mistake!

But Rod put a hand on his shoulder and gave him a smile. "We've all done it," he said. "Have another go."

Second only in importance to the rumours about when the new recruits would actually start 707 Ground School (Lecture 1: Electrics) were the stories they'd picked up about some of the captains they'd eventually be flying with. Captain Gilmore was supposed to be a grumpy martinet who would not reply to any crew member failing to address him as "Captain Gilmore, sir" and whose largesse when it came to giving away take-offs and landings was notable for its infrequency. In comparison, Captain Hayling allegedly vacated his seat not long after the undercarriage was retracted, swapped uniform shoes for carpet slippers and let his two copilots run the show until the halfway down the descent, when he'd don his shoes and slide into his seat for the approach. As often as not, so the rumour went, he would turn to the copilot in the right seat with a wink and a "Show me how to land it, fellah!"

Discreet enquiries before departure from Heathrow had elicited the information that "Soapy" Nixon was one of the good guys. The nickname derived from his frequent exhortation to the crew members he was training that they must follow SOPs, the acronym for Standard Operating Procedures. Generous, too, thought John. The first landing had been done by the captain himself at JFK and the second by First Officer Mike Archer at LAX where yellow smog had cut the vis to barely a mile. Their night arrival into Honolulu coincided with a rain squall sending a gusty wind

lashing across the wet runway, which concentrated all their minds.

"You happy?" the captain had asked Rod, who was flying the approach.

"I am if you are," came the reply.

"Your landing, Rodders. Good luck."

"Amen," muttered Frank Armitage, watching like a hawk from the flight engineer's seat.

Another whim the new boys had to familiarise themselves with was the correct form of address when speaking to more senior pilots, which again varied in formality according to personal preference. Captain Nixon's requirements, as relayed to John by Rod at the initial briefing at Heathrow, was that "sir" or "Captain" would be expected whenever the crew were in uniform, both in the air and on the ground. In civvies, off duty, "sir" would do until the captain specifically allowed "Nigel". Never "Nige."

John quickly noticed that different rules applied to Frank Armitage, who addressed his captain randomly as "Skipper" or "Skip" or "Nigel", regardless of where they were and what they were wearing. The junior pilot also heard "Nige" a few times from the flight engineer's lips, which didn't seem to cause offence. Perhaps the familiarity was allowed because, according to Rod, the two older men had been fellow crew members in Lancaster bombers during the war. After a few drinks, John was informed, you could sometimes get them to relate some of their wartime experiences.

* * * * *

The Second Officer retracted the sextant, the pressurised cockpit air hissing as it escaped past the instrument seal until the hatch was securely closed again. He stood down from the stool to find the captain standing by the nav table, where Rod was seated.

"Having fun?"

"Yes, sir. Just doing another sun line. It's not far off overhead so Rod says it'll be a good test of accuracy."

"Good stuff. I might have a go myself later, see if I can remember how to do it."

"Yes, sir."

"Work out your position line later, John. Go and sit in my seat for a bit. Mike's up there right side. Rod will look after the nav—give you a break. You know how to tweak the heading if needed?"

"Yes, sir."

"Mike'll keep an eye on you—if he doesn't fall asleep again."

"Okay, sir."

"Tell him to let you do a couple of turns, say twenty degrees either way, just so you can see the response. Go left first to get us closer to track."

"Okay, sir."

As the Second Officer moved forwards, marvelling that he was going to be allowed to steer the 707, even if via the electrical intermediary of the autopilot, Nigel turned to Rodney.

"How's he doing?"

"Not bad. Still a bit nervous after the muddle outbound."

"I've done that more than once."

"Me too."

The captain nodded. "They're so young. What is he? Twenty? Twenty-one?"

From the engineer's panel the moustachio'd face of Frank Armitage turned towards them.

"Just remind me, Skip, how old were you and me when we were bombing shit out of the Jerries in 478?"

"At least twenty-three, Frank!"

"There you are, then."

"What was 478?" asked Rod.

"Best damned Lanc in Bomber Command," said Frank. "No matter how badly Nigel abused it it always brought us home."

"Even though I had the most useless flight engineer!" joked the captain.

"I think you mean the best flight engineer."

All three men momentarily looked forward, aware that the Boeing was rolling into a left bank. Nothing was said while they waited for the wings to level again. After half a minute a roll right brought the aircraft back to its original heading.

"Someone's having fun," said Frank.

The captain grunted and tapped his finger on the Loran set. "I'll watch the kit for a bit if you want a break, Rodders."

"Thanks, sir. I'll go back and check with the Chief, see what booze we want to liberate from the bar for later."

"Good thinking."

The cockpit door closed behind Rod and Nigel sat himself in the observer's seat, casually watching the

instrument panels in front of the two younger pilots. Then he turned to look at the engineer's panel. Frank was reading a magazine about antique clocks.

"You still making those things, Frankie?"

"Yep. Selling 'em too. Have to. BOAC don't pay me enough."

"My heart bleeds."

"You want to buy one?"

"I've heard about your prices. I'd have to sell my car!"

"You still got that Vitesse?"

"Uh-huh. Nice motor. What are you driving these days?"

"Mark Ten Jag."

"They're paying you too much!"

"That'll be the day."

There was a minute's silence. Looking forward, Nigel could see the two copilots chatting to each other. He sighed and muttered to himself: "Well, I'd better see if I can get anything out of the Loran." He raised his voice to speak to the engineer. "How are we doing on fuel?"

Frank reached out for his clipboard and ran a pen down one of the columns on his log. "We're fat, Skipper. Three and a bit tons over diversion minima."

"Groovy . . . as the young people say. San Diego fuel gives us Palm Springs as well, doesn't it?"

"Yeah . . . more or less. Loads of fuel." Frank jerked a thumb at the Loran screen. "Assuming you don't get us lost."

"Bloody cheek!"

The engineer rubbed his moustache. "Sad to hear about Maddie, Nige. Give her my love when you next see her. Is there anything you can do to sort things for her?"

The captain shook his head. "Not really. As I told you the other day, I don't even understand what she's supposed to be doing. Something about stopping carbon dioxide getting into the atmosphere."

"Well, I have to say that seems a pretty pointless exercise to me. But she's a bleeding professor, isn't she . . . there must be something else she can turn her talents to."

"You would have thought so. I think she's worried about her post grad students. Their grants would be cancelled."

"She should have stuck with flying, Nigel. Everyone said she was a bloody good operator on the four-fans. Better than some of the blokes, they said."

"So I heard."

"Apparently she was a whizz on instruments. Wasn't it you who taught her the basics?"

"Yes. They were losing too many people who couldn't handle crap weather. I didn't want her ending up in a smoking hole in the ground."

"I was never uncomfortable the time I flew with her." The engineer's mouth curled into a mischievous smile. "You on the other hand . . ."

"Watch it, matey!"

Both men laughed and Nigel turned his attention to the Loran, fiddling with the control panel, watching the trace on the screen.

"Did she never think about civvy flying, Nige?" asked Frank, picking up the conversation. "She could have hacked it. No doubt about it."

"Difficult choice for her, she always said. She liked flying but she knew the chances of finding a job were remote. No one wanted female airline pilots in the post war years."

"A few of the gals got in," observed Frank.

"Yeah, that's true," agreed the captain, still watching the Loran screen. "But Maddie loved chemistry too. So aviation's loss was science's gain. She's still pally with a couple of the ATA girls, though. That posh bird . . . what's her name?"

"Dizzy, wasn't that it?"

"Yeah, and the Indian girl."

"I remember her. A stunner."

"Yeah. Dizzy is an instructor at Booker. The three of them do trips together sometimes."

"Three women in a plane," laughed Frank. "I bet it's quiet!" He paused briefly. "Has Maddie got a fellah?"

"Not that I know of," said the captain. He thought for a moment. "We don't talk about these things."

"She had a boyfriend at White Waltham, didn't she?"

"She was engaged. But her fiancé bought it a couple of weeks before they were due to get hitched."

"I remember vaguely, now I come to think of it. Mossie pilot, wasn't he?"

"Yes, pathfinder on 139 Squadron. Shot down over Dortmund."

Again the two men fell silent. The engineer ran his eyes over his panel, flicked a few switches, checking

the 707's generators and inverters, then leant back in his seat and picked up his magazine again.

"I know where we are," beamed Nigel, looking up from the chart where he'd constructed a fix from the two position lines he'd found on the Loran.

"Halfway to nowhere?"

"Over the Pacific Ocean!"

"No need to watch out for flak then!"

CHAPTER 6

The 12th century parish church of All Souls guarded the western outskirts of Woodstock, a ten minute walk from Madeleine's house. In fine weather many of the parishioners would make their way to the nearby Blenheim Palace Park after services for a stroll along the lake. In the eighteenth century Capability Brown had designed the landscaped gardens for the Duke of Marlborough. It had been the architect's idea to create the lake by damming the River Glyme.

Four members of the All Souls choir were now seated round the dinner table in Madeleine's house. Their discussion had strayed from the best musical settings of the Eucharist to the latest idiosyncrasies of Benedict Avery, the dour choirmaster at All Souls. Madeleine's guests were Jean Coster and Daphne Edwards, two of the choir's altos, and Matthew Claridge, bass. A fifth place at table had been laid for Toni Clark, Madeleine's lodger, but she had phoned to say she would be late home from work.

Daphne took a last mouthful of spaghetti bolognese and laid her fork on her plate. The others had already finished.

"All I'm saying is it's not very democratic. He didn't ask our opinion—he just foisted it on us."

"He's the choirmaster. He can do what he likes," said Matthew, a barrel-chested man who could comfortably sustain a bottom D note with considerable power. "He's always behaved that way—ever since he joined the choir, anyway."

"Nobody actually likes his compositions but no one's prepared to tell him face to face."

Jean sighed. "That's because we know how he'll respond."

"Sulk like a child," said Daphne. "That's what usually happens when he doesn't get his way."

"Toni says she quite likes his setting," said Madeleine.

"She would, wouldn't she," scoffed Daphne. "The modern Bohemian Woman," she added mockingly.

"Who doesn't believe in God," added Jean. "You would think that's a vital prerequisite for a singer in a church choir, wouldn't you?"

"Well, I'm not so sure myself," said Madeleine. "About God, I mean. But I love religious music. Except for Benedict's setting of the Eucharist, of course. I agree with the rest of you on that."

"The Sanctus—it sounds like a cat being tortured. There's absolutely no harmony between the sopranos and the altos. I hate those bits where we're only a semitone apart as we go down the scale."

Matthew took out his pipe. "May I?"

The others murmured approval and watched as the bass singer stuffed the pipe bowl with aromatic tobacco and held a match to it.

"What's that peculiar society Toni's a member of?" asked Daphne. "Some sort of atheist group."

Madeleine smiled. "The Atheist Christian Society, or something like that."

"Ridiculous!" scoffed Jean. "How can you have such a thing?"

"She's tried to explain it to me," said Madeleine. "The idea is that you can follow the Christian code without believing in Jesus Christ or God."

Matthew blew out a cloud of smoke. "Well, maybe she's right, there," he smiled, "in the opposite case, anyway. There are some so-called Christians in our congregation who could do with a spot of retraining!" He carefully avoided eye contact with the other diners as he spoke.

"Including Benedict Avery!" laughed Madeleine to block any danger that Daphne or Jean might ask him who he was referring to.

"Look, I don't mind having a word with him," said Matthew, following Madeleine's lead by moving away from tricky ground. "I'll try something diplomatic. I'll say we find it difficult to do it justice."

"As I said before, it's about time we did Harwood again," said Daphne. "We haven't done it for ages."

"My favourite, I must agree," said Madeleine, with Matthew nodding his concurrence.

The meeting she had called had achieved its purpose, thought Madeleine as she cleared away the main course detritus. If Matthew was happy to tell

Benedict that the choir didn't want to do his Eucharist setting then it would save her having to take on the task. It wasn't that she deliberately avoided confrontation—she could stand her ground when necessary—but the choirmaster's misogynistic proclivities were well known so the bass singer was likely to make more headway.

What could not be disputed was the choir's reputation, which had soared since Mr Avery took charge. Despite the previous incumbent's competence steadily diminishing in inverse ratio to his consumption of alcohol, he had been retained in post because the vicar hadn't had the heart to dismiss him. Matters came to a head when a hymn book hurled during Friday practice had injured one of the boys. The choirmaster was sent packing.

It didn't take long to realise that the new man was not all sweetness and light. The first insult was his demand that the choir practise most of the hymns for the following Sunday. *Hymns! We don't need to practise hymns! We do the Eucharist and the anthem for Evensong! That's what we've always done!*

Mr Avery also unsettled some of the choir members by having them sing their parts without the accompaniment of the others. So for example he'd single out the tenors and ask them to do their bit on their own, testing their pitch control. The boy sopranos were used to following instructions from figures in authority without challenge and most of the men were similarly untroubled. But three or four of the altos and tenors voiced their disapproval at this further questioning of ability, especially Jean Coster

and Daphne Edwards, two of the most senior choir members.

Initially the only compliment that could be paid to the new man was that at least his admonitions were untainted by the whiff of alcohol. But before long parishioners began to remark on how much better the choir was beginning to sound. Then they noticed that the surplices of the boy choristers were now adorned with medals hanging from ribbons round their necks. It turned out that Mr Avery had enrolled them in the Royal School of Church Music.

There was some controversy over the medals and the ranks they denoted. The newly appointed Head Chorister's medal was chrome plated and dangled from a red ribbon. For the Deputy the medal was unplated pewter. The other ranks wore blue ribbons, navy blue for the Seniors (four boys) and sky blue for the Juniors (three boys). Mr Avery insisted that the Head and Deputy should be selected by audition. But parents of other boys quickly objected. To fend off internecine warfare the vicar intervened and instructed his choirmaster that appointment would be in accordance with length of service. Mr Avery grumpily backed down. Harmony was restored.

"Hello, everyone, sorry I'm late. Couldn't get away," came the voice from the doorway. It was Toni, Madeleine's lodger. In contrast to the sensible clothes of the other ladies Toni was wearing a multicoloured kaftan and pale green leggings. Her short cut chestnut hair was streaked with red. "Any scoff left for me?"

"Toni! Good to see you!" greeted Daphne with a beam with Jean enthusiastically nodding agreement. "We were just talking about you, weren't we, Maddie?"

"There's plenty of spag bol left," said the chemistry professor to her lodger. "And a bit of salad, too, if you want a few vitamins."

* * * * *

It was through the church choir that Madeleine and Antoinette first met. At the start of practice one Friday a couple of years previously the new alto ("call me Toni") had been introduced to the others as a new resident of Woodstock. She raised a few eyebrows with her unconventional clothes and exuberant opinions but happily conformed when the vicar asked her to consider quieter attire for the Sunday services. "That's cool, Rev!" came the reply.

Some time afterwards Madeleine happened to bump into Toni at the shops in Woodstock and the two of them decided to have a chat over a cup of coffee at the Cafe Marcello. Toni mentioned that she might have to leave the choir because she'd split up with her boyfriend and the house they owned together would have to be sold. Madeleine made sympathetic noises but Toni dismissed the matter with a wave of her hand. Anyway, she had continued, it would be impossible to buy her ex-lover out because the rent she could realistically charge a lodger would not cover the extra mortgage and more than one lodger would be too claustrophobic. She was thinking she'd move

out into rented accommodation herself, somewhere nearer where she worked, and stick the equity she'd accumulated into a building society.

Her job, apparently, was with the Emcro film production company based in Oxford. "Originally they called themselves 'Empire Chromatic'," Toni would explain to anyone interested enough to ask. Toni herself was an assistant producer. "I even get a name check on some of the stuff we churn out," she would say. "Half a second of fame as my name rolls up the screen."

Madeleine had come up with an alternative solution to Toni's accommodation problems.

"I live on my own in a largish house. If you lodged with me you could rent your house out to two or three lodgers or a family. That would cover your mortgage, wouldn't it? We could start off with a trial period to see if we're compatible and then take it from there."

And so the deal was struck. The landlady found the tenant easy to get on with despite their differing life styles and tastes. At thirty-eight, Toni was seven years younger than Madeleine and her variable working hours a contrast to the professor's regular nine-to-five routine.

After initial wariness they gradually became friends and no longer reticent about personal matters. One evening they polished off a bottle of Chardonnay and, unusually for Madeleine, started a second. The professor even accepted one of her lodger's roll-your-own cigarettes, a rare indulgence for her.

"So, is there a man in your life, Maddie?" asked Toni, wreathed in smoke.

The older woman shook her head. "No."

"What about in the past?"

Madeleine narrowed her eyes. "I nearly got married in 1944 but my fiancé . . . died."

"Sorry."

"He was killed in the war."

"And since then?"

Madeleine thought for a moment. "There have been one or two . . . liaisons. Nothing earth-shattering. No, that's not true . . . there was this American scientist a few years ago . . ." She sighed. "These days I seem to manage without . . ." Her voice tailed away and for a minute or two the pair of them sat silently, puffing at their cigarettes.

Madeleine looked at her lodger. "How about you, Toni? Have you got . . . anyone?"

A shake of the head. "No, not just now. As you know, I split up with Clive—my boyfriend."

"Had you been together long?"

"Three years . . . maybe four."

"Was it mutual, the break-up?"

"I went to bed with one of his friends."

"That would explain it."

Toni blew out smoke. "Well, yes and no. The agreement was we were free to shag other people if we wanted to."

Madeleine nodded, unable to think of a suitable comment. It was not an area of behaviour she was familiar with.

"Clive was jealous, I suppose. Maybe I shouldn't have done it, knowing they were good friends. But he

fucked one of my friends a while back and I wasn't too bothered. I watched him do it."

"What do you mean?"

"It was a threesome."

"A what?"

Toni smiled. "Clive and me and—"

Madeleine saw the light and held up her hand. "No further information required."

"I like sex, Maddie."

"Yes, I got that impression."

"But I'm not a nympho. I'm selective about who I get naked with."

Madeleine sipped at her wine. She hesitated, as if undecided about pursuing the conversation.

"Like I said, I'm not addicted to it," continued Toni, ending the pause. "I can go for months without sex. It tends to be an impulsive thing for me."

The chemistry professor's curiosity finally overcame her reticence. "Threesome? How does that work? Is it always two women and one man or can it be the opposite? Do the two women . . . er . . . do they . . . I mean . . ."

Toni laughed. "Anything goes! Two girls can have fun if they're in the mood. With or without a man." She registered the raised eyebrows on her landlady's face. "Don't worry, Maddie, I won't make a pass at you!"

"You wouldn't get very far!"

"I know that. You can sense these things."

"Unknown territory for me," muttered Madeleine. "Girls, I mean."

"It's usually blokes for me. I'm not really a lesbian."

Madeleine shook her head. "Well, this is a strange conversation. I didn't think I'd be discussing sexual proclivities with my lodger."

Toni topped up the wine glasses. "I haven't been to bed with anyone since Clive and I broke up. No one I've met recently has floated my boat. Anyway, occasional celibacy isn't such a bad policy. You can relax a bit instead of looking around for excitement all the time. Sort of calming."

"I think you just get out of the habit of sex, don't you," said Madeleine. "It's ages since I've looked at a man and thought, 'come to bed with me'. Perhaps I'm too old for that sort of thing now."

"I like your brother," said Toni. "He could have his wicked way with me if he wanted."

Madeleine put a smile on her face. "He's already taken."

"He's got family, hasn't he?"

"Sort of. He's divorced, but he lives with a woman and her daughter. She's a divorcee too. Jackie, she's called, short for Jacqueline. She's quite a bit younger than Nigel and her daughter's about twelve, I think."

"You'll have met her, then?"

"Uh-huh. She seems okay. Ex-stewardess."

"In BOAC, like Nigel?"

"Yes. Does some sort of ground job at the airport now. If you're a stewardess the rules say you have to stop flying when you get married. A bit unfair because the ruling doesn't apply to the stewards or pilots."

"Well, married women are going to produce babies, aren't they?"

"Suppose they're in a job where they want to carry on working?" said Madeleine. "What's to stop them having nannies?"

"Not on this planet, Maddie! Unless you're in the upper classes or you've got loads of money!"

"It's also cynical commercialism, Toni. You'll attract male passengers if they think the stewardesses are available, so the thinking goes."

A pause.

"You were a pilot in the war, weren't you?"

"Yes."

"How did the men take it? Women encroaching on their territory?"

"Some were happy, others weren't."

"What was the biggest plane you flew?"

"Lancaster, same as Nigel."

"Those big bombers? Like the Dambusters?"

"Yes."

"How come you both got into flying?"

"I'll tell you about it one day."

Toni slowly shook her head in wonderment. "You're incredible. You flew big planes and now you're an expert on . . . what is it?"

"Catalysts in organic chemistry."

"Amazing. I don't even know what that means."

Toni reached out to top up their wine glasses again but Madeleine put a hand over hers.

"Nigel's your half-brother, isn't he?"

"That's right. We've both got the same father."

"I'm an only child," said Toni. "When I was a kid I desperately wanted a brother or sister but it never happened."

"Well, we grew up apart," said Madeleine. "My dad split up from Nigel's mum before I was born. So I was brought up by my mum and Nigel by his mum. We didn't meet until we were teenagers, and that was by chance."

"No reconciliation between the two families, then?"

Madeleine shook her head. "Only Nigel and me, not our parents."

"But you both see your dad, don't you?"

"Yes, when we can. He and my mum live in France."

"Oh, yes, I remember you telling me. Provence, isn't it?"

"That's right. Nigel sees them more than me, 'cos he gets free airline tickets. I get out there once or twice a year. We all spent Christmas together there last year, which was nice."

"So, Nigel's mum and step-dad. You don't have anything to do with them?"

Madeleine picked up the bottle, hesitated a moment and then poured an inch of wine into both glasses. "His dad died two years ago. His mum's in a nursing home near Maidenhead. Nigel and I go to see her once a week but it's hard work . . . she's going senile and getting quite bitter and twisted. She doesn't like me because I'm the offspring of her first husband and sometimes she says nasty things."

"So why bother, if all you get is grief?"

"A sense of duty really, relieving Nigel of some of the burden. You have to remember she's a widowed old lady who's gradually losing her faculties. She wasn't quite so horrible when she was younger."

"I was lucky, I think," said Toni. "My parents have always loved me, despite what they call my unconventional lifestyle. They were very upset when they found out I'd had sex with another girl. But they said whatever I got up to I would always be their daughter and that parents' love was unconditional."

* * * * *

After Jean and Daphne and Matthew had left Madeleine and Toni began clearing up and washing the dishes.

"They don't really like me, do they?" asked the lodger quietly.

"Who?" responded her landlady, though she already knew the answer.

"The other choir members."

"Nonsense," said Madeleine. "It's just . . . certain individuals who . . . think you're a bit . . ."

"Weird?"

"I was going to say 'unusual'."

"I'm thick skinned, as you know, Madds, but if there's bad feeling—"

"Stop it! You're well liked and well respected in the choir. To be frank, the fault lies with . . . those individuals, not with you."

"Jean and Daphne aren't in my fan club."

Madeleine dropped a couple of plates into the bowl. "They're a different generation, Toni, that's all. If you don't fit the standard pattern you're suspect."

"You mean married, two kids, nice little house and all the rest of it."

Madeleine smiled. "Something like that."

"Well, it's just not me. I don't want to be tied down to a domestic life. I value my freedom. Although at times I wish I'd had a kid or two. I like children."

"I'm happy in my rut, I suppose." Madeleine paused, then sighed wistfully. "Kids . . . yes, I regret not having kids. And I think I would have been happy as Terry's wife."

"Terry?"

"My fiancé."

"Oh, yes."

For a moment the only sound was Toni stacking crockery as she dried the items. "Everyone likes you, Madds," she said, restarting the conversation, "even if you don't fit the pattern."

"I think that's because I'm . . . unthreatening. Alright, no hubbie, no kids but I dress like them, talk like them."

"You're nothing like them. You're . . . interesting. And you've got brains. More than anyone else in the choir, I reckon."

"I wish Daphne wouldn't call me 'Professor' at choir practice. I have asked several times."

"That's just snobbery," said Toni. "People think people with titles are automatically superior. It's hypocritical."

"In what way?"

"They're very humble when they're saying their prayers but some of them don't like the idea of poor people or uneducated people or non-white people in their middle-class church."

"Sadly, I think you're right there," agreed Madeleine.

"Jean thinks I'm beyond the pale because I'm an atheist."

"Has she said so?"

"Not directly, Madds," said Toni, picking up a fresh dry tea towel. "That's not her way. Sarky comments is more her style."

Madeleine picked up the bowl and emptied it. "There'll always be differences in any group of people. The best part about the choir is that the whole is greater than the sum of its parts. So you don't see eye to eye with Jean and Daphne and we all think Benedict is . . ."

"A pain in the backside."

Madeleine laughed. "I was going to say 'difficult'."

"Ever the diplomat, Maddie."

The clearing up complete, Toni announced she was off to bed.

"Sleep well," smiled her landlady.

Toni turned as she got to the door. "Oh, I'll be away for a fortnight next month. I just found out today."

"Anywhere nice?"

"San Francisco . . . we're thinking about doing a film about this new hippie movement and San Fran seems to be the centre of it all. I'm going out there with a colleague for a recce."

"You lucky thing! Any room in your entourage for an old chemistry professor?"

"You're welcome to come along, Maddie, but you'd have to pay your own way."

The landlady shook her head sadly. "Too much going on, Toni. Maybe the next time if you give me more notice. Nigel can sometimes get me discounted fares. I'd love to go to the States for a holiday rather than just to give chemistry lectures."

"It's great, this hippie thing. It's going to stop wars and spread love around the world."

"I'm all for that," laughed Madeleine.

"John Lennon's right . . . All You Need Is Love."

"I agree."

"Maybe I'll find a nice American while I'm working there. He'll shag me rotten for two weeks and then we'll split up, never to meet again."

"Uh-huh."

"You're smiling, Madds. Are you thinking you'd like a piece of the action as well?"

"No comment."

CHAPTER 7

Verity Abbott found Bill Syerman in Lab 2C, tinkering with the large cylindrical apparatus on the workbench which was usually the domain of Xiu Ying Song and James Ibsley. Apart from the safety officer the lab was empty because the four post grads had gone to London with the professor.

"Having fun, Bill?"

"Not the word I'd chose, Verity."

"What are you doing?"

"Replacing the heater element in the mixer chamber. They can crank it up a few more degrees if they want."

The professor's secretary sighed. "Do you actually know what goes on in here, Bill? I know a bit about the chemicals and so on because I have to type out Madeleine's reports. But what's actually happening in the apparatus?"

"I probably don't know much more than you, V." Bill smiled at her. "Let's have a cup of tea and compare notes."

"That's why I came to find you. The kettle's not working in my office. Could you have a look at it?"

"Sure."

"I was going over the road to get a doughnut. Want one?"

"I'll never say 'no' to an Oakley's doughnut."

The kettle malfunction was no more than a wire coming adrift inside the plug. Bill commented to Verity that someone should have noticed that the cord grip was loose and Verity nodded, pretending to understand what he was talking about. Her husband, Gerald, took care of that sort of thing at home. Perhaps, she thought, she should learn about these things herself.

Back in the lab, Bill resumed his work on the mixer chamber, pausing every now and then for a mouthful of doughnut and a swig of tea. Having completed her office duties for the day, Verity brought her own mug into the lab to chat with Bill.

"How's the family?" she asked.

"All fine, thanks," replied the safety officer. "Kids driving the memsahib mad of course. Bloody school holidays!"

"Going away at all?" The Organic Chemistry Gas labs would shut down for the last two weeks in August for the annual summer break.

"Yes. We've hired a caravan in Bognor. How about you?"

"Gerald and I are off to the Lake District. Lots of walking. Let's hope the weather stays fine."

For a minute or two there was only the sound of Bill humming to himself as he fastened the protective cover on the mixer chamber.

"There we are, all ship-shape and Bristol fashion," he said, laying his screwdriver on the bench and wiping his hands on a cloth. "That should keep the hooligans happy for a while."

"I wonder how they're getting on in London," said Verity.

"I'm not hopeful," said Bill. "I know the Prof's good at making her case but I've heard other people saying there's not much point to what they're doing. There must be better things for the SRC to spend their money on. For a start they could send it to the MOD to stop the rundown of the armed forces."

It was a frequent complaint of ex-Warrant Officer William Syerman that the continual cutting of the Ministry of Defence budget by the Labour government of Harold Wilson was a strategic error. "Look, we've just had the Six-Day War in the Middle East for God's sake," he would say. "In a troubled world we should be strengthening our military, not weakening it."

"I know Susan is worried about what's happening in Hong Kong," said Verity. "The riots and demos."

Bill responded through a mouthful of doughnut. "Bloody communist agitators! The Chinese government's behind it, of course."

"Susan phones home every other day. She says her father says the situation isn't as bad as the

newsreels are saying. But she thinks he's understating it to stop her worrying."

"Bloody lefty students waving their Little Red Books. Lock the bastards up and throw away the key—that's what I would do."

"How's it going to end? They're planting bombs now, the demonstrators."

Bill nodded, sipping his tea. "Yeah, I know. The MOD called me a day or two ago, wanted my advice."

Verity raised her eyebrows. "Why?"

"I was in bomb disposal during my days with the Devonshires, as I think I've told you before."

"Yes, I remember."

"So, it seems the HK Police asked the Foreign Office how to deal with the IEDs. The FO johnnies asked the MOD."

"IEDs?"

"Improvised explosive devices . . . home made bombs."

"It's just horrible. Killing ordinary people who just want to live their lives in peace."

"Spot on, Verity! They're clever bastards—most of the devices are fakes but they still cause panic, which is the intention, of course."

"You're not going to Hong Kong yourself, are you, Bill?"

The safety officer smiled. "No, I'm retired, V, remember? They're sending out a few serving officers but they're also asking some of us old hands with experience how we would deal with the problem. I was a trainer, you see."

"Weren't you ever frightened, Bill, when you had to deactivate the bombs?"

"And how! I had a scare or two over the years. One of my buddies got blown up when we were in Aden."

"Was he killed?"

"There wasn't much of him left to put in the coffin."

"That's awful! How did you cope with it?"

"We used to joke about it. One of my mates used to eat half a tube of Smarties before a job and told everyone they were his 'brave pills'."

"What's going to happen in Aden, Bill?"

"Wilson's pulling the troops out. The locals can carry on killing each other after we've left, if they want to."

"Is that a good thing, us leaving?" asked Verity.

The safety officer scratched his chin. "It looks like running away, doesn't it? I appreciate this country can't afford to keep all the overseas bases going but I just think the socialists are cutting too much too quickly."

"They've kept us out of Vietnam though. Isn't that a good thing?"

Bill picked up the screwdriver and tapped it on the bench. "On balance, yes," he said slowly. "It's probably an unwinnable war. There are millions of Chinese commies ready to march south if they think the Yanks are coming out on top."

Verity sighed. "What a world we live in, eh, Bill."

"Look on the bright side, V. Five years ago we were on the verge of nuclear war, remember?"

"Yes, it was frightening."

"Yeah. We all let out a sigh of relief when Khrushchev backed down."

"So are the Russians not such a threat these days?"

"They're not our friends, V. I was unhappy when the Prof had to show those Russian scientists round the labs. I don't think we should be sharing what might be sensitive information."

"It was officially an 'Exchange of Information on Catalysis' according to the briefing we got."

"I just hope it wasn't all one way, Verity. What did we get in return? Plus, we don't want another Nene."

"What do you mean?"

"The Nene was a Rolls-Royce jet engine, as invented by Frank Whittle. We gave the Reds a few of them and they promptly made their own copies and stuck them in their MiG-15s and shot down our guys in Korea."

Verity shook her head sadly. "As I said, what a world we live in."

"Puts worrying about our budget into perspective, doesn't it?"

"That's one way of looking at it." Madeleine's secretary pointed to the apparatus on the work bench. "But it's a shame they're thinking of winding up this project because there's not enough funding."

"That scanning microscope cost a fortune. That used up a load of dosh." Bill tapped the top of the mixer chamber with his screwdriver. "And this thing . . . thirty-seven pounds, that new element cost, just so they can heat the gases up another twenty degrees."

That sort of money would pay for a week in a seaside caravan for a family of four."

"So, I know they use methane and carbon dioxide," said Verity. She pointed to the apparatus. "They mix them in that thing, don't they?"

"Yes, that's the idea."

"And they produce hydrogen and carbon monoxide, as far as I can make out from Maddie's reports."

"Correct."

"Any idea why?"

"My understanding is that the products are useful but the main reason is to cut down the carbon dioxide pumped out by the power stations. They're looking to react it with methane to remove it from the exhaust gases."

"Why . . . is it poisonous or something?"

"No, I don't think so. I think it's something to do with trapping the sun's heat but I'm not sure how that happens."

"I gather Susan and James do the mixing of the gases and the other two do the analysis of the end products."

"That's about it, V. I think they're trying different conditions to get the best conversion yield. They can vary the temperature in the heat chamber and they can switch on UV light in there too—I think that helps."

"The bit that I don't understand is what the catalyst does."

Bill puffed out his cheeks. "All I know is it speeds up the reaction. Beyond that it's a closed book to me."

"Valence electrons," said Verity mysteriously.

"Pardon?"

"Valence electrons. They spend a lot of time talking about them. There's not a Methane Reformation report that leaves my typewriter without a fair sprinkling of valence electrons in the text."

"That's something to do with curtains, isn't it?"

Verity laughed. "That's 'valance', Bill. We're talking about 'valence' with an 'e'."

"We're talking Double Dutch I reckon," came the weary reply.

"One report I had to type was about infra-red radiation," said Verity. "The earth gives out radiation when the sun heats it and the CO₂ reflects it back from the sky. Is that what you were talking about?"

The safety officer screwed up his eyes. "Yes, I think that's the main reason for the research. But maybe they're wasting their time and money. I haven't heard anyone else talking about it being a problem. You don't hear about it in the papers or on the telly."

Verity sighed. "So I suppose that's why the funding is being shut off."

"Well, it's not like we're going to lose the Prof. She's doing lots of other work and taking lectures and tutorials. And she's already said our jobs are safe."

"Thank goodness!" muttered Verity.

"For sale, one scanning electron microscope, almost new, one previous owner. That would bring in a quid or two. They could give us a pay rise."

"What about the post grads, though, Bill. What'll happen to them?"

"They can go out and get proper jobs. Do something useful for a change."

"Oh, come on, Bill. They've got brains. I've heard them talking about opportunities in America. Our loss would be America's gain."

"Yeah, they're okay, I suppose." The safety officer grinned. "Tell you what, though. That Luke could do with a year or two in the army. That'd sort him out!"

CHAPTER 8

The Government buildings in Whitehall were impressive from the outside but, lacking air conditioning, oppressive for their occupants in the July humidity. Room 303 at number 22 was no exception, and the large fan on the desk seemed merely to circulate the uncomfortable warmth.

Behind the desk, with their chair backs close to the oak-panelled wall, sat John Davis, General Project Manager at the Science Research Council, and next to him a heavily jowled middle-aged man whom Madeleine had not seen for several years. Professor Alfred Grove was standing in for Sir Melvyn Hocklan, the Chairman of the Allocation of Resources Committee. John Davis had introduced him as a member of the Spending Review Board. It transpired that all expenditure sanctioned by the Committee now had to be approved by the Review Board, acting on behalf of the Treasury. Madeleine forced a smile as she shook his hand but memories of academic rivalry

dampened her spirit. She had previously won an award which Professor Grove's supporters thought should rightfully have gone to him. His cold eyes now belied his smile and suggested that the slight still rankled.

Next to Madeleine on the other side of the desk, seated line abreast, were Luke Stirling, Xiu Ying Song and James Ibsley. Joe Curtis was attending a family reunion and Madeleine had reassured him that he was not letting the side down by his absence. She had been pleasantly touched by the offer of the students to support her when she was putting the case for continuation of the Methane Reformation project.

The meeting started with Madeleine summarising the progress of the project, writing points on a flip chart in felt-tip and occasionally bringing in the post grads to add detail. It was disappointing to detect lack of encouragement from Professor Grove, who listened with stern detachment. As if to compensate, John Davis threw in the occasional friendly smile and nod of the head.

The task completed, Madeleine thanked the two men opposite for their attention and sat down again.

There was a long pause which accentuated the stuffy atmosphere in the room and discomforted all those present apart from Professor Grove, who seemed to Madeleine to be perversely enjoying the moment. Revenge for the award she had snatched away from him all those years ago? Her old rival looked directly at her for a moment or two and took a deep breath.

"Well, Madeleine, thank you for your presentation. It clearly means a lot to you and I'm impressed with the dedication of you and your team." There was another pause and it was obvious that a "but" would follow. A wasp flew in through an open window and haphazardly buzzed round the room. James Ibsley waved it away with a flick of his hand. Madeleine sensed that Mr Davis was uncomfortable, as if he too knew what was coming next, which of course was to be expected.

"But," continued Professor Grove, "with the current squeeze on Government spending we have to be sure that funds are directed to where they will be most productive and I'm afraid the Methane Reformation project doesn't fit into that category."

Madeleine nodded. "I'm curious, Professor Grove—"

"Alfie."

"Thank you. I'm curious as to how the decision has been made. I understood that the Government allocated funds to the SRC and the Allocation Committee decided how those funds are distributed. Is it Sir Melvyn who has cut us off?"

Professor Grove furrowed his brow, evidently considering how to frame his answer. "We asked Sir Melvyn to talk to us at the Review Board because we were reviewing the SRC budget in light of reduced public spending. We stressed that prioritisation would be expected to be firmly applied and less . . . critical . . . projects decelerated or in extreme cases abandoned. Sir Melvyn agreed that MR fell into the latter category, I'm afraid, Madeleine."

"So was it your decision or Sir Melvyn's?" She saw Professor Grove stiffen and realised her question might be a veiled attack. To restore civility she added: "What I mean is . . . was it the Allocation Committee or the Treasury? If I want to appeal against the decision, who should I be talking to?"

"It might be possible to organise a compromise," said Professor Grove, ignoring the question. "If you can find private sponsors to fund the bulk of the research then the Review Board would not object if the SRC allocated top-up resources."

"What do you mean by 'bulk'?"

"We would need to discuss it."

"Rough figure?"

"Based on your current expenditure around 75 percent would probably meet our requirements."

Madeleine shook her head. "Impossible," she muttered.

"Excuse me. May I make a comment?" All eyes turned to Luke Stirling.

"Go ahead, young man."

"I just wanted to say that we think we've been really privileged to do this work for Prof Maunsell. She's been an inspiration to us and even if you shut us down it won't have been a waste of time."

Xiu Ying and James nodded their agreement.

"We're at the forefront of catalytic research," continued Luke. "We probably know more about the effects of variations in surface topography than anyone else in the world."

"That's a very bold statement to make," said Professor Grove, eyes narrowed. He turned to Madeleine. "Is that true?" he asked.

"I would say that we're among the front runners."

"We get enquiries all the time," said Luke. "Other people follow us. And we've just started using tungsten carbide doped with palladium, which Prof Maunsell suggested might speed up removal of carbon deposits during the periodic operation. We're getting positive results. No one else is doing that yet."

Madeleine turned to look at her student, mildly and pleasantly surprised. It was Luke himself who had floated the palladium variation and she had agreed after he had impressed her with his knowledge of the transition metal's properties. He now knew more about the subject than she did. Exasperating though he was at times, Luke could switch on the charm when required. His chivalry was a welcome antidote to the afternoon's grim proceedings.

For a moment silence descended. The wasp had relaunched itself and hovered towards John Davis, who brushed it aside.

"I think you've backed the wrong horse," said Professor Grove eventually, looking at Madeleine.

"What do you mean?"

"The catalysis stuff is excellent. It's acknowledged you're a leading light. I know a bit about it myself, of course." For a moment his eyes twinkled and a hint of a smile played around his lips. The award Madeleine had beaten him to was for exploring the catalytic properties of transition elements. "But stopping CO₂ getting into the atmosphere—it's just pointless."

"The total is increasing every year. One day it'll be significant."

"Not while you and I are alive and kicking. Or our children or grandchildren for that matter. Where are we now? Three hundred parts per million?"

"Three twenty."

Professor Grove snorted. "The experts say you'd have to get up to four hundred to make any difference to the atmosphere."

"Granted," said Madeleine wearily. "But isn't it a good idea to have the technology in place for when it's needed?"

The Review Board man shook his head. "The problem won't arise. There'll be other energy sources available long before we get to four hundred. Nuclear, solar, even wind and tide. They'll be cheaper than coal and oil."

Madeleine shrugged. She had no answer.

"So, don't worry about it. You backed the wrong horse this time. I know you've got plenty of other things going on so you'll have more time for them."

John Davis cleared his throat. "What will you post grads do if the project is wound up?" he asked.

Luke and James both began to answer but Luke indicated to his colleague that he should go ahead.

"We've looked at other options," said James. "It's most likely we'd split up. I'll try to stay in the UK because my girlfriend works in London. I think Joe's looking at the States. I don't think he'd have a problem finding something."

"I might go back to Hong Kong," said Xiu Ying. "I'm sure I can get a teaching position, maybe even at the University. My Dad might be able to help me."

John Davis turned to Luke. "What about you, young man?"

"Not sure," came the reply. "The States sounds good to me but my girlfriend might not want that so I'll have to talk it over with her."

Professor Grove stood up abruptly. "Well, I think we're just about done here," he said, his voice gruff again. His eyes scanned the others. "Let me say once more I've been impressed with your work and I'm sorry it might be coming to an end. You can rest assured that full funding is guaranteed until the end of October, when the situation will be reviewed. If you can find a sponsor to take over, all well and good. As I said, we're happy to let the SRC make a contribution. Whatever happens, I wish you youngsters well and hope things work out okay for you."

He walked round the desk and towards the door then stopped and turned. "You too, Madeleine. All the best."

"Thank you," responded the chemistry scientist quietly.

Professor Grove nodded. "Perhaps we'll meet again in happier circumstances."

"Perhaps."

The atmosphere brightened after the Review Board member had left the room. John Davis was effusive with his apologies.

"Don't mention it," said Madeleine. "There was nothing you could do."

"Are you going back to Oxford now?"

"I thought I might look at the shops first. The others are going . . . where is it?"

"We're going to Battersea Fun Fair," grinned Xiu Ying. "We asked the Prof to come with us but she won't."

"Think I'm a bit old for roller coasters and candy floss," Madeleine said ruefully.

John Davis looked at his watch. "I was going to walk down to the Embankment for lunch. Would you lot like to join me? There's a nice cafe in the Victoria Gardens—the Siena."

The chemistry scientist surveyed her charges. "May I be excused?"

"You go with Mr Davis," said Luke. "We'll go straight to Battersea if you don't mind."

Madeleine smiled at the Project Manager. "It sounds nice. Count me in."

* * * * *

"So you were at Bletchley during the war?" queried Madeleine as John Davis raised his hand to attract the waiter's attention. They had just decided that a refill of coffee would round off a pleasant lunch.

"Yes."

"In what role?"

John smiled. "Guessing the undecoded content of the enemy signals to help the analysts choose the rotor combinations to set up in the bombe. So it was more my knowledge of German than my maths degree which was useful to them . . . oops!"

The chemistry scientist noted his sudden concern.
"What is it?"

"I hope you're not a Russian spy!"

"Nyet!"

"Well," continued John with a grin, "we were told we weren't supposed to talk about our work to outsiders. Daft, isn't it? The war finished two decades ago and yet we're still bound by the Official Secrets Act."

Madeleine nodded. "Perhaps they're still using decoding procedures these days that you were using back then and they don't want potential enemies to find out."

"More likely the bureaucrats love the power it gives them to control other people."

"I'm very familiar with that," laughed Madeleine. "It's the same in academia."

The waiter showed up and topped up their cups.

"Where did you do your maths degree?" asked Madeleine, picking up the conversation.

"York . . . how about you?"

"New College, Oxford. Just across the road from the Chemistry Gas labs where I work."

"Did I hear you were a pilot during the war?"

"Yes, delivering aircraft to their bases." Madeleine gave the SRC manager a brief summary of the White Waltham set-up.

"That's very impressive, I must say."

"A lot of it was mundane, really."

"Did you have any scary moments?"

Madeleine smiled. It was the most asked question when people found out about her background.

"There were times when it was big relief when the wheels touched the ground."

"So after the war the chemistry was more important to you than the flying? You didn't want to carry on?"

"It was a close run thing, John. I loved both. But there weren't many opportunities for female pilots . . . or for the men either, actually. There were loads of demobbed pilots looking for work but not many jobs available."

"It was much the same at Bletchley. There wasn't a great demand for cryptologists."

"What did you do?"

John took a sip of coffee and licked his lips. "Started teacher training but soon realised it wasn't for me." He paused for a moment and frowned. "Sounds silly now but as a boy I wanted to be a footballer."

Madeleine raised her eyebrows in surprise. "Really?"

"I was good at football at school. Had a trial with Chelsea as a teenager. But everyone told me I would be wasting my intellectual abilities kicking a leather ball round a field and they pointed out that professional footballers don't earn much. So it was off to York to read maths."

"Where did the German come in?"

"My mother was from Elsenach, in Thuringia. I was more or less bilingual." John laughed. "She thought it funny that one of the men I worked with was called 'Turing'."

"Ah, yes, Alan Turing."

There was a silence as they both remembered the brilliant codebreaking mathematician who had been

driven to suicide after prosecution for homosexual activity.

The chemistry professor restarted the conversation. "So you gave up teacher training . . . what happened next?"

"Very boring. I applied for a post as a statistician. Wound up as a civil servant, which is where I am today. Middle class job, earning a middle class salary, father of two middle class children who are also doing middle class jobs."

"Nothing wrong with that. Does your wife work?"

"Yes . . . as far as I know she's still working. Haven't seen her for a while."

"Oh . . . ?"

"We're divorced."

"Oh."

"Wasn't acrimonious. Just drifted apart."

There was a pause.

"What about the children? Where do they live?"

"My daughter lives in Basingstoke and my son in Swindon. Both married."

"Any grandkids?"

"Not yet . . . how about you?"

"I'm not that old, John!"

"Sorry, I meant children rather than children's children."

"You're forgiven!"

"You're very kind!"

They both laughed and then Madeleine looked across at her companion. "No children."

"Didn't you want them? Sorry, that's a bit personal."

"I never married, John. My fiancé was killed during the war and I haven't met anyone to take his place."

John nodded slowly and Madeleine sensed he was struggling to know what to say next. She put on a bright smile. "What are your hobbies, then?"

Her companion returned the smile. "I compile crosswords for the newspapers."

"Interesting."

"And I do cartoons for them, too, and for other publications."

"Also interesting."

"And I play bridge."

"So do I."

"In a club?"

"Uh-huh . . . you?"

"Yes . . . Teddington, where I live."

Madeleine nodded. "If you find yourself in the Woodstock area come and play with us."

"Very kind. I'll make a note."

CHAPTER 9

"Pretty good, Maddie . . . like you've never been away!"

"No, I let the nose drop while we were inverted. Lost points for that."

"Rubbish! Do another one . . . do a four-point hesitation."

"Here we go!"

In the clear blue August sky the Chipmunk trainer accelerated in a shallow dive until the airspeed needle wound up to 120 knots. In the front cockpit Madeleine eased the stick back until the nose was a few degrees above the horizon. Her left hand firmly held the throttle fully open to ensure the Gipsy Major engine was delivering its full one hundred and forty horsepower.

Madeleine flicked the stick right and then centred it again. The aircraft responded with a rapid roll to the right which abruptly stopped with the wings at right angles to the horizon. Her left foot moved forward so

the rudder would hold the nose up. Another flick rolled the aircraft upside down. Madeleine centred the rudder, now pushing the stick forward to keep the nose in the correct position, the pilots hanging in their straps. Two more flicks of ninety degrees brought them back to level flight. The chemistry professor inched the throttle back to cruise power.

"Perfect!" came the comment over the intercom from Prudence Dismore-Whyte in the rear cockpit. "Better than I can do them!"

"Over-rotated a bit on the third flick."

"But you instantly corrected. You haven't lost it, Madds!"

"Nice of you to say so, Dizzy."

"Let's try a stall turn left and right."

"On the Tiger, left was more difficult than right, wasn't it? Gyroscopic forces from the prop if I remember correctly. Or was it the other way round?"

"Do one and you'll find out!"

Madeleine pulled the Chipmunk round in a steep turn to check there were no other aircraft around that might get in their way. She asked her instructor to confirm they were still clear of regulated airspace.

"You tell me! What's that town just to the east?"

"Basingstoke?"

"Reckon so. We just need to keep clear of Aldermaston and the TMA." Aldermaston was the nuclear research establishment a few miles southwest of Reading and the London Terminal Manoeuvring Area protected airliners approaching and departing London Heathrow airport.

The original plan was a standard Cherokee outing from Booker, destination Goodwood, where the three ex-ATA pilots would land for lunch. But Parminder Collins had called Dizzy a few days previously to cry off, telling the instructor she needed to support her daughter at her Pony Club Gymkhana. By coincidence the Wycombe Flying Club had recently acquired a de Havilland Chipmunk training aircraft for aerobatic instruction so Dizzy had suggested to Madeleine that the two-seater should be their mount for the trip to Goodwood. En route Madeleine would get a chance to try some of the manoeuvres she and the other ATA pilots practised during their wartime flying on Tiger Moths and other types. The instructor's briefing to her friend had been brief and concise.

"The Chippie is just like the Tiger. Just do everything twenty knots faster."

The first stall turn was a shambles. Madeleine left it too late to rudder the nose round and down. The Chipmunk hung motionless for a moment, nose pointing vertically upwards, then started to slide backwards. Instinctively both pilots grabbed the stick tightly to prevent reverse airflow slamming the control surfaces against their stops. Then the nose abruptly dropped, the negative 'g' forces throwing both pilots against their shoulder straps, and the little aircraft headed vertically downwards.

"Sorry!" said Madeleine as Dizzy pulled the Chipmunk out of the dive.

"Let's try it again, Maddie. You can always cheat a bit, you know."

"What do you mean?"

"As you pull up, wind on a few degrees of bank in the direction you're going to yaw at the top. If you're doing a display no one will notice you're not exactly vertical as you go up and it'll help the nose round."

The reprise was successful and after another stall turn in the opposite direction the instructor suggested they had a go at a Porteous Loop.

"What's that?" asked Madeleine. "I don't remember those."

"Invented by Ranald Porteous, the Auster display pilot. At the top of the loop it's full pro-spin control inputs. You do one turn of the spin then recover to complete the loop. I'll do one as a demo then you can have a go."

After another ten minutes frolicking in the summer sky Dizzy told Madeleine to reset her direction gyro and turn southeast towards their destination. Silhouetted against the midday sunlight the South Downs slid slowly towards the Chipmunk at a sedate 90 knots and soon the pilots could see Selsey Bill in the further distance and the silver waters of the Channel beyond.

They flew a standard overhead join at Goodwood airfield, Dizzy pointing out the orientation of the three grass runways and then leaving Madeleine to her own devices as they let down on the dead side and joined the circuit crosswind.

"Half flap, seventy knots on base leg, full flap sixty on finals," reminded Dizzy. "Try to three point her, Madds, just like the Tiger or the Spit. If you wheel her on like a Lancaster she'll bounce to kingdom come."

"Not bad!" came from the rear cockpit after touchdown.

"A little bounce."

"Not higher than the width of a gnat's you-know-what." In their ATA days the part of the gnat's anatomy Dizzy was referring to would have been specified more crudely.

They taxied onto the visiting aircraft apron and shut down, happy to get out of their flying suits and let the sea breeze refresh them. A bowser growled towards the Chipmunk and Dizzy supervised the refuelling while Madeleine tidied the cockpits.

"Time for a well-earned lunch," said the instructor with a grin.

"Which I'll pay for."

"If you insist!"

* * * * *

After their meal the two pilots wandered over to the area set aside for deck chairs and settled themselves comfortably. The temperature had dropped a degree or two and the chemistry professor and the flying instructor congratulated themselves on choosing a perfect day for their trip to the coast. A Cessna and an Auster were practising circuits, their landings observed with critical eyes by the two women.

"Ouch!"

"Held off a bit high."

"That's more like it."

"Oh, dear!"

Madeleine turned to her friend. "Shame Pam couldn't make it."

"Three in a Chippie would be a tight fit!"

"How old's her daughter?"

Dizzy narrowed her eyes. "Seventeen . . . eighteen, maybe. Have you met her?"

"Don't think so."

"She's got twin boys as well."

"Yes, I remember, a bit younger, aren't they?"

"They're a lovely family. If I were ever to have kids I'd want them to be like Pammy's kids."

"We've left it a bit late, Dizz," said Madeleine ruefully.

"I think I'd be useless as a mother," said the instructor. "Too impatient. I'd wallop them if they were misbehaving."

"How's Norman?"

"Well, thank you."

Norman Aldridge, Deputy Manager at South Bucks Aero Engineering, was Dizzy's partner. Like her and Madeleine he had never married. SBAE was also based at Booker so the instructor and the engineer could frequently share transport when their work schedules coincided.

"Give him my regards."

"Will do . . . what about you, Madds? Have you got a man hidden away somewhere you haven't told us about?"

"Nope."

"Do you ever get lonely?"

"No . . . I don't think so. Anyway, I'm too selfish to have some one else intruding into my life."

"I doubt that."

"I've got my friends and I've got Nigel and my Mum and Dad."

"And how is Captain Gorgeous?"

"He's fine, thanks. Swanning around in a 707 somewhere no doubt."

"Or sitting by a hotel swimming pool with beautiful stewardesses."

"Or putting the world to rights in a bar with grumpy old pilots and flight engineers."

"I'm glad you and me and Parminder keep in touch. I've got so many happy memories of the Waltham days."

Madeleine nodded. "A great bunch of people . . . well, most of them, anyway."

"Some of them were decidedly odd. Remember that Squadron Leader? We called him 'Stuck on Transmit' 'cos he was always telling you things you'd already heard a thousand times."

"And the chap who used to refer to people as 'it' if they annoyed him."

"Yes, Dave somebody . . . 'it came wandering in and demanded a cup of coffee . . . well, I told it it would have to sort it out itself . . .'"

"Who was that dreadful American woman? Used to treat the ground crew like servants. 'Foghorn', we called her."

"Name escapes me now," said Dizzy. "But I remember they called you 'Miss Iffy'."

"I think Pammy started that one."

"Because you were instrument qualified, wasn't it?"

"Not officially. But we were losing people in bad weather, weren't we? As you'll remember, we lost Amy that way. Nigel unofficially taught me the basics of instrument flying. So the girl doing IF became Miss Iffy."

"And some wag turned it into Mississiffy, as I recall."

"And that became 'Sternwheeler'."

"That's right, I remember now. Childish, weren't we?"

"You said it! But I didn't mind the 'Iffy' name. I think it encouraged others to get instrument time."

"Including me, when I saw how useful it was. I did a couple of hours under the hood with Nigel, too."

"Yes, looking back, my brother probably helped to save a few lives."

"I'm sure you've told me before, but which one of you started flying first?"

Madeleine glossed over her father's divorce from Nigel's mother and reminded Dizzy that she had first met her half-brother at a table tennis tournament organised for church youth clubs. Not knowing they were related, they soon became friends and began doing things together when circumstances allowed. Living over thirty miles apart the chances did not arise very often. The easiest option was to take separate trains into Northampton, telling their respective parents they were meeting friends, which was the truth when they could persuade others to join them. Sometimes Madeleine would catch the bus to the airfield at Sywell, where most Saturdays Nigel worked at the flying club, cleaning the aircraft, sweeping the

hangars and running and fetching as required. He didn't get paid but sometimes one of the local pilots would take him up for a brief flight round the local area. One or two of them would let him handle the controls.

Narrating the story to Dizzy, Madeleine could still picture the momentous day when a grinning Nigel pointed to a biplane a little larger than the others with a three-seat enclosed cabin in front of the pilot's cockpit. The aircraft was a Fox Moth, he told her, and the pilot had asked him if he and his friend would like to come for a flight in it. She was hooked, she told Dizzy, from the moment the wheels left the ground.

Not long afterwards Nigel met her again at Sywell and she could tell from his expression something was wrong. He took her hand and led her to the restaurant, where he sat her down and went to order a pot of tea. Madeleine waited for him to come back to the table, dreading what he was going to tell her.

"There's no other way to say this," said Nigel.

"What is it?"

"You and I are related."

"How do you know?"

"You're my sister . . . my half-sister."

It was quite a shock, Madeleine told Dizzy. It seemed that Nigel had found a document at home referring to "Nigel Maunsell". When he asked his mother why his name had changed she said quite openly that her first husband was named Henry Maunsell and so that was the name recorded on her son's birth certificate and other documentation. After Dorothy married Cyril Nixon her son's name changed

when Cyril officially adopted him. Then Nigel mentioned to his mother that one of his female friends happened to have the same name and wasn't it a strange coincidence. To his alarm, Dorothy flew into a temper and told him that his new friend was almost certainly the bastard child of his father. Nigel's mother forbade him to meet her again.

Nigel was angry because he had planned to ask Madeleine if she would be his girlfriend and now that was impossible. She told him that she would have agreed to go out with him but there was no reason why they couldn't be friends. Continuing to defy his mother's prohibition Nigel arranged another meeting. He asked Madeleine to ask Henry if he would come too. The reunion brought plenty of tears and hugging and father and son both agreed to keep in touch. They also agreed that Dorothy would not be party to this arrangement.

The half-siblings both started flying lessons at the same time, Madeleine told Dizzy, hers paid for by Henry when he realised she couldn't be talked out of it and his in lieu of payment for his work at the flying club, with a parental contribution when further funding was required. Nigel was careful to make sure that his mother never knew he was still meeting his half-sister and Henry, fearful that the top-up would instantly cease if the liaisons were discovered.

They both learnt the art of flying quickly, pretending there was no element of competition between them. They both soloed on the same day, one after the other, Nigel after nine hours and fifteen minutes of instruction and Madeleine after nine hours and ten

minutes. As soon as he finished school Nigel successfully applied to join the Air Force. His sister successfully applied to join the ATA four years later, interrupting her degree course.

"Where you became Miss Iffy," repeated Dizzy now.

"I've got a different nick-name now."

"Go on."

"Madam Methane."

"Because of your research, I suppose."

"I believe an alternative is 'Mrs Cowfart', though I haven't heard that with my own ears."

Dizzy enquired about the progress of the MR project and Madeleine related the sorry tale of its probable demise, the flying instructor nodding her head in commiseration.

"What are the chances of finding a sponsor?"

"One or two American companies have shown a bit of interest."

"So they're taking this carbon dioxide problem seriously, then?"

The chemistry scientist shook her head. "No, they're not fussed about that but they like what we're doing on catalyst research. It's big business if you can speed up industrial chemical processes."

"So there's some hope you can carry on?"

"They would want us to relocate to the States. I don't want to do that and the post grads aren't that keen either."

"Shame. Isn't there anyone on your side?"

"The SRC Project Manager. He makes sympathetic noises which I think are genuine and he says he's

trying to get the Treasury to sanction funding for continuation."

"Good for him."

"Yes, but there are powerful forces lined up against him. I'm meeting him again this week to discuss tactics."

"I'm glad I stuck to flying, Maddie. I'd hate to be stuck in an office arguing about funding."

Madeleine smiled. "Well, actually, we're meeting in Oxford for dinner and then the theatre."

Dizzy raised her eyebrows. "Madeleine Maunsell, you're a dark horse. You *have* got a new man . . . and you weren't going to tell us."

"Hardly a new man, Dizz. We've been on a couple of dates and we mainly talk about finding money for MR. That's all there is to it."

"So far."

"So far."

CHAPTER 10

"The jewels of our father, with washed eyes Cordelia leaves you. I know you what you are, and, like a sister, am most loath to call your faults as they are named. Love well our father. To your professed bosoms I commit him. But yet, alas, stood I within his grace, I would prefer him to a better place. So, farewell to you both."

Jacqueline Holmbeck frowned and ran her finger down the page. "Sorry, Emm, lost the place. Too busy admiring your performance."

"It's Regan's line, Mum. 'Prescribe not us our duty' or something like that."

"Found it!"

"Actually can we start again?"

"Okay, but I'll need to go to the shops before they shut or you and Nigel will have no tea."

"Just one more run through, then."

Jackie, seated on the sofa, flicked through her Penguin "King Lear" to find the right page. Her

daughter, Emma, walked to and fro in front of her, muttering some of her lines. There were twenty-six years between them, although more than once Jackie had been pleased to hear people ask her if she was Emma's elder sister. Both were slender, with long blonde hair, high cheekbones and green eyes.

"Is Daddy coming to the performance?" asked Emma.

"He said he would."

"Shame Nigel can't make it."

"Probably for the best though, darling. The two of them prefer not to be in each other's company, as you know."

"Maybe Nigel would be allowed to come to one of the rehearsals."

"Maybe."

"What about Auntie Maddie? Does she know about it?"

"Yes, I think Nigel's told her."

"When's he supposed to be back?"

Jackie looked at her watch. "Any time, assuming he's not stuck in traffic."

"I wonder if he'll bring me another baseball cap. My friends think they're really cool."

"He never comes home empty handed, darling."

Thursday evenings were quite relaxed at Nigel Nixon's house in Epsom because Emma's homework load was light and didn't include maths, which her mother couldn't help with if Nigel wasn't at home. The English teachers at Mounthill Grammar School were in the habit of letting pupils off their homework if they were taking part in the autumn term Drama

Competition, the idea being that they would use the time to practise their lines. In fact it was rumoured that some pupils had signed up for the competition purely to avoid English homework.

Emma Holmbeck thought she would have a go "just for a laugh", as she told her mother. When the casting was under way for the Second Year Team B production of "King Lear", Act One, Scene One she was offered the part of Cordelia without the faintest idea of the character. Jackie knew the Bard's work a little and told her daughter she had the best female part. Surprisingly, Emma had immersed herself in the task and said she would have been happy playing one of the other sisters as she thought they were more realistic characters because they had the imperfections Cordelia lacked—being a baddie was more fun, in Emma's words.

Nigel showed up halfway through the rerun, dropping his suitcase and his flight bag in the hall on his way to the lounge. He was in civilian clothes, his uniform packed away in his case.

"My two favourite ladies," he greeted them with a grin.

"Good trip?" asked Emma.

"Yes, thanks."

"How was Chicago?" asked Jackie.

"Quite pleasant, actually. Just like an English summer at this time of year."

"I remember trips there in the winter. The coldest place on the planet."

"Ah, the good old days on the Strat!"

"I always preferred the Connie."

"I thought you flew on Comets, Mum," said Emma. "The ones that kept crashing."

"That was later," said Jackie. "They used Stratocruisers and Constellations on the Atlantic runs."

"O'Hare was hectic," said Nigel. "Some people reckon it's the busiest airport in the world. Non-stop yak on the RT." Nigel's flight had arrived at Heathrow in the early hours and he had caught up on his sleep in the BOAC crew dormitory located just outside the airport boundary before driving home.

"I'm off to the shops, dear. Lamb chops for tea?"

"We'll need mint sauce, Mum."

"Noted. I'll check the larder."

"If I make you a cup of tea, Nigel," said Emma, "will you run through 'Lear' with me?"

"Can I be the king?"

"You'll be everybody apart from Cordelia."

Nigel Nixon and Jackie Holmbeck had been a couple for half a dozen years, both divorcees. There were no offspring to complicate the separation of the airline pilot and Denise, his first wife, who had found herself a man who wasn't away from home so much and who shared her interest in painting. In fact the two had originally met at the Epsom Artists' Society. Nigel did not challenge her accusation of insufficient attentiveness, nor did he comment on Denise's selfishness in breaking up her new partner's marriage.

Jackie had originally met Nigel on the Comet fleet before she herself was married. They flew together a few times and grew fond of each other although the friendship never strayed beyond innocence. At that

time she was an "A" girl stewardess and he a First Officer on the elite fleet, the first jets to grace the world's airways. Etched in both their memories was a traumatic moment during a stopover in Cairo. The entire crew were enjoying an evening out at the Al Khal restaurant when the manager came over and summoned the captain to his office. The captain reappeared grim-faced a few moments later and broke the dreadful news to his crew that Comet Yoke Peter had come down in the Mediterranean near Elba and it looked like there were no survivors. A second similar Comet disaster three months later forced the authorities to ground the entire fleet pending investigation. The cause was found to be explosive decompression in the airliners' cabins arising from metal fatigue, a phenomenon not fully understood at the time, exacerbated by design and manufacturing flaws. BOAC Comet services would not resume for four years, during which time Nigel had been promoted to command on the piston-engined Argonaut fleet and Jackie had met Andrew Holmbeck, married him and given birth to their daughter.

Jackie devoted herself exclusively to bringing up Emma for the first two years of the little girl's life and then applied for work as a ground girl with her former employer, hiring a child minder to cover her working shifts, three days a week at a check-in desk in the makeshift terminal buildings on Heathrow Airport's North Side. Soon after Emma started school her mother added a fourth duty day each week, looking after the company's passengers who now departed

from the newly opened Oceanic terminal in the airport's Central Area.

Jackie was upset and hurt when she learnt her husband had found another woman, a secretary at the office where he worked as a solicitor. But then she realised she had been deluding herself when she told herself she still loved him. She asked for compassionate leave to sort herself out. The split was more acrimonious than Nigel's from his erstwhile wife because Andrew and Jackie could not agree terms on his rights of access to their daughter, whose custody had been awarded to her mother. Eventually Jackie realised her vindictive lack of cooperation was hurting Emma so she gave ground and a settlement was reached. She promised Emma that she would stay off work as long as needed to make sure her daughter didn't feel neglected. Emma, who seemed to withstand the upheaval better than her mother, sensed that Jackie's unhappiness was compounded by not seeing her BOAC friends. She nagged her mother to start working again and gradually a sense of tranquillity returned, helped by Andrew having moved out of the marital home.

Soon afterwards Jackie used one of her concessionary staff travel tickets to take herself and her daughter to Barcelona for a short holiday. The check-in girl was a friend who discreetly upgraded them to first class and so a few hours later mother and daughter found themselves comfortably ensconced in the forward cabin of a Britannia turboprop cruising through French skies, the creature comforts they were plied with all the more enjoyable

because they were free. The chief steward remembered Jackie from her days flying the line and so they had a good old catch-up, eagerly swapping gossip. While they were chatting in the galley the flight deck door opened and the captain appeared, wearing his uniform cap, as required by company regulations.

The pilot's eyes widened in surprise and then he grinned. "Jackie Holmbeck. Well I never."

"Hello, Nigel. I heard 'Captain Nixon' during the welcome announcement when we boarded and wondered if it was you."

"Why didn't you say something? You could have come up front for take-off."

"Last I heard of you, you were still flying Argonauts."

"They're all gone, as you know. Some sold to other companies, some turned into saucepans."

"How do you like the Brit?"

"Love it. Are you coming all the way to Accra with us?"

"Getting off in Barcelona."

"Shame."

The chief steward had left the galley to carry out various duties in the cabin and so the pilot and the ex-stewardess could cautiously explore more personal territory. When they discovered they were both divorced and neither was currently attached to a long term partner Nigel asked her for her phone number and said he would call her to arrange a date after she returned home.

Not long after they'd started going out Nigel asked Jackie if she would move in with him. After consulting her daughter, she agreed. Andrew accepted her suggestion that he acquire ownership of their house, compensating Jackie with a lump sum representing her share of the equity.

The animosity from Jackie's ex-husband towards her new partner had arisen when Emma innocently remarked to Andrew that it was "cool" having two Dads, even if she called one of them "Nigel" rather than "Dad".

"Let's get this straight, Emma," said Andrew with a scowl. "I am your father. Your only father. Nigel is not your father and never will be. Got it?"

"Okay," said Emma, less alarmed than her mother, who had heard the outburst. "But I see him more than you."

"More's the pity. But never forget that you are my daughter, not Nigel's."

"Mummy loves him. And so do I."

"More fool you. And her."

Emma suddenly got angry. "It's all your fault for leaving Mummy."

"No, it's not. It's her fault for not loving me."

"Stop it, you two!" pleaded Jackie, intervening. "We've been through this a million times."

With the passage of time the bitterness between the two men had receded somewhat, together with Andrew's resentment at seeing his daughter less than Nigel did. At Emma's prompting, Jackie had even managed to persuade them to meet each other to declare a formal truce.

Not long after the dust had settled she arranged a party for some airline friends. Emma briefly appeared before she went to bed and one of Jackie's guests asked her what she was going to be when she grew up. Would she work for BOAC, like her Mum?

"Yes," said Emma. "I would like to be a stewardess. But if I can't be a stewardess I suppose I'd have to be a pilot."

Cue much merriment among the assembled company, especially the cabin crew and pilots.

CHAPTER 11

For mid-October the weather was mild as Madeleine Maunsell and Toni Clark walked from Madeleine's house towards All Souls church for Friday evening choir practice. In contrast to the pale skinned chemistry professor the TV producer still glowed with her Californian sun tan. Under her duffel coat she was wearing one of her favoured kaftans. In her hair dangled strings of beads of various colours. Her landlady felt distinctly frumpy walking alongside her.

It had been an unusual day, thought Madeleine. Morale in the Gas Research lab was holding up as well as could be expected, thanks to a stay of execution for the Methane Reformation project. Funds had now been guaranteed until December with a possible extension to the end of January, thanks to intense lobbying on her behalf by John Davis. She had met the Science Research Council Project Manager a few times socially and found him good company. Twice he had partnered Madeleine at her

Bridge Club in Woodstock, staying overnight in the spare bedroom.

A further bonus was that Luke and Joe had found a method of boosting the tungsten carbide catalyst effectiveness by changing the ratio of ruthenium to palladium in the doping and increasing the catalyst's surface area. Yield in the periodic process had improved by a shade under three percent and by a fraction over four percent in the steady state variation. Madeleine had lost no time in informing the SRC accordingly.

Earlier in the day Verity Abbott had put through a phone call to Madeleine from America. The caller was Maxwell Murdoch, an entrepreneur whose family had amassed their fortune constructing major engineering works, especially power stations, as Madeleine discovered later. Although the two of them had never communicated before by any means the American spoke with the directness associated with his countrymen, bypassing the hindrance of formality.

"Hey, Madeleine, how are you doing?"

"Very well thank you, Mr Murdoch."

"Max, please."

"Yes."

"Okay. I'll get to the point as this call will eat up all my dollars. I want to bring your Reformation project over to Wilmington. You and the whole caboodle—all your kit and all your people."

The chemistry professor took a moment to recover from the surprise. "Where did you say?"

"Wilmington, North Carolina. We'll pay your fare and sort you out with accommodation. Plus you'll get a fat paycheck."

"Why do you want us to work there?"

"It's what God wants."

"Pardon?"

"I got a message from the Lord, Madeleine. In a dream."

The chemistry scientist paused, wondering for a moment whether the American was joking. For a brief second she even entertained the idea that the whole thing was a prank dreamt up by her post grads for their amusement, probably at the instigation of Luke Stirling.

"Whaddya say, Madeleine?"

"What sort of message?" countered Madeleine, deciding to play along for the moment in case "Maxwell Murdoch" was indeed the genuine article.

"The Lord told me I gotta help him clean up the planet. So we gotta build more nuclear power stations and clean up coal-fired stations. That means trapping carbon dioxide before it gets out into the atmosphere. My people tell me you can do that sort of thing so that's why I'm offering you the deal. Whaddya say?"

"It's very sudden . . . Max. We would need to think about it."

"Yeah, that's okay. My people tell me you don't have close family so it wouldn't be difficult for you to come over. The students will follow you if we offer them enough dough."

"I do have friends," said Madeleine, reacting to the American's presumptuousness and apparent invasion of her privacy.

"Course you do, honey. Everyone's got friends. But we'll pay for them to come and visit with you as often as you like or you can go visit with them. It's not a problem."

"Couldn't we carry on doing the work here?" asked Madeleine, deciding the caller was genuine. "We could send the results to you in Willman . . . Willingham—"

"Wilmington. Well, I'm not so sure about that. It would kind of slow everything down."

"If we came out, how long would we be there?"

"As long as it takes. You'd get leaves of absence so you could go home to your friends."

"I'll need to think about it, Max. I'll tell the post grads what your plan is and see what they say."

"Great. I'll call you in a coupla days, see if it's gonna pan out. I hope we can cut a deal. Remember, we'll be doing the work of the Lord."

After ringing off, Madeleine set her secretary the task of researching Max Murdoch's background, which meant phoning contacts in various libraries. The professor walked into the MR lab and, unusually, found all four post grads working. She briefly smiled to herself, wondering if the students had set up a sophisticated lookout system to alert them to their mentor's imminent arrival to give them time to adopt the poses of dedicated researchers. Immediately she rebuked herself for her cynicism and reminded herself

that never in the past had they bothered to prevent her seeing them less than fully occupied.

Luke and Joe were engrossed with "Deneuve", one of the Thermal Conductivity Detectors, staring at the trace on the cathode ray tube. On the other side of the lab Xiu Ying and James were checking the manometer measuring the pressure of the gases in the reaction chamber.

"Is this a good time to chat?" began Madeleine.

"Give us a couple of mins to record these readings, Professor," said Joe.

"We'll be free then, too," said Xiu Ying.

"I'll put the kettle on, then," said Madeleine. "Verity's out on a job so I'll make the tea."

"We've still got a couple of doughnuts left," said James. "We can divvy them up."

When the chemistry professor passed on the gist of the phone conversation she'd had with Maxwell Murdoch, James nodded.

"I've heard of this bloke somewhere. Stinking rich. Some sort of religious nut. There was a scandal, I seem to recall. Had an extramarital affair and then told everyone it was okay 'cos the Lord had forgiven him. My girlfriend heard about it because the wife was a well-known actress and dancer."

Melanie raised her eyebrows. "Interesting," she observed. "The thing is . . . do we want to decamp to North Carolina to do this work?"

"For me, it would depend on Gill, my girlfriend," said Luke. "I couldn't go if she didn't want me to."

"Same for me," said James. "I wouldn't want to leave England while Stephanie is working in the West

End. The producer reckons 'You Must Be Joking' will run for at least another year before it runs out of steam. She won't leave that show until it closes unless a better offer comes along."

"So if the rest of us go, what will you do?"

"I have absolutely no idea. Teaching maybe. Or find another PhD project if there was anything available."

"What about you, Susan?" asked Madeleine. "Your boyfriend's American, isn't he? Would that make a difference?"

Xiu Ying smiled sadly. "He's not my boyfriend any more. We broke up."

The others looked at her in surprise. This was the first any of them had heard of it.

"What happened?" asked Joe. "Or don't you want to tell us?"

"He has got a new girlfriend."

"Then he's a fool," said Joe.

"Quite," added James.

"Have you got a new boyfriend?" asked Luke.

"No."

The diversion seemed to Madeleine to have run its course so after a respectful second or two she steered the conversation back to the original theme.

"What about you, Joe? Would the States appeal to you?"

Joe shrugged. "Possibly."

"What about Maria?" said Luke. "Would she go with you?"

Joe pouted. "No, I don't think so."

"Don't tell me you've broken up, as well?"

A pause. "Well, we're still going out but . . ."

Another pause. Luke turned to his mentor.

"Would you go, Professor?" he asked.

Madeleine smiled. "Like you lot, I've got mixed feelings. It would be nice not to have to worry about funding, wouldn't it? On the other hand I'd miss my friends and the other work I'm doing."

"Would this Murdoch geezer pay us a regular salary?" asked Joe. "I mean, if he's prepared to throw a load of cash at us . . ."

"His words were 'fat paycheck'," said Madeleine. "Figures weren't mentioned."

"Maybe it wouldn't work anyway," said Luke. "Okay, we can convert small amounts of CO₂ to CO but we don't know if it could be done on an industrial scale."

The chemistry scientist nodded. "I had the same thoughts, Luke. Theoretically the process could be scaled up, but there might be practical problems, such as the cost of the catalyst for a start. Even the well-stocked wallet of Max Murdoch might be overstrained buying a few tons of palladium."

"How much is he worth, anyway?" asked James.

"Verity's checking his background as we speak," came the reply.

"What about the religion thing?" asked Luke. "We wouldn't have to go to church or anything like that, would we?"

"I am a buddhist," said Xiu Ying. "I would not want to go to a Christian church."

"Alright," said Madeleine. "Even assuming the financial package was attractive and there were no religious . . . obligations . . . and partners did not

object, I'm not sure we would want to carry on without you, James. We've all been a good team for a year now. It would be a shame to break it up."

"Nice of you to say so, Professor," said James with a smile as the others nodded their concurrence. "But I'm sure you could find a substitute."

"Yeah, but would he be able to play darts as well as you?" laughed Luke.

"Or she," added Xiu Ling. "Maybe we could find a lady chemistry post grad who could throw arrows at the wall."

"Women can't play darts," grinned Luke. "Well known fact."

"I beat you last time," said Xiu Ying.

"I deliberately let you win!"

"Bullshit!" said Joe. "She beat you fair and square. Mind you, you were probably half-pissed at the time."

"Right," said their mentor, "if I can drag you back to the main point . . . what am I going to tell Mr Murdoch?"

"It's a definite maybe," offered Joe.

"And a definite 'no' from me," added James.

"Just had a thought," said Luke. "Perhaps if we accepted Murdoch's offer the SRC would keep MR going here purely to stop the Yanks pinching our work."

"Good point," said the professor. "I'll mention it to John Davis next time I see him, see what he thinks."

"Something else to think about," said Joe. "Suppose we get established over there doing our thing and then the Lord tells Mr Murdoch to pull the plug. What would happen then?"

No one had an answer.

Verity Abbott came back from her detective work to find her boss rinsing the tea mugs in the secretary's office. She was about to take over when the phone rang. She picked up the receiver.

"It's your brother," she mouthed to Madeleine. "Shall I put him through to your office?"

"Hello, Maddie," came the voice in the earpiece as the professor sat herself down. "Are you well? You haven't been chopped by the Ministry yet?"

"Still here," replied his sister. "The SRC haven't closed us down yet but there's only funding for another few months. We might have to transplant ourselves to the US of A if we want to carry on." Madeleine summarised the offer from Max Murdoch and her students' responses.

"Would you want to go across the pond to work?" asked Nigel.

"Mixed feelings, really," came the response. "I'd miss you and my friends."

"What about that Project Manager you've been dating?"

"What about him?"

"Are you . . . you know . . .?"

"No, we're not."

"Well, maybe . . ."

"And maybe not. Shall we change the subject?"

A chuckle from the other end of the line. "Actually, the reason I called is because I got a call from Fearnville earlier today."

"Not another escape attempt, I hope?"

"No, she's in hospital . . . unconscious. They think she's had a stroke."

"Oh, sorry to hear that. What about tomorrow's visit, then. Is that off?"

"Yes. She's in Wycombe General. I'll pop along myself but there's no need for you to come."

"Are you sure?"

"The hospital says she's not responding to anything at the moment so there's no point in visiting her as far as you're concerned."

"Okay, but if she regains consciousness and you'd like me to help you deal with her I'll make myself available . . . not very well put, that, was it? 'Deal with her.' A bit heartless."

"Perfectly understandable, sis, the way she's treated you over the years."

After the call Madeleine buzzed Verity.

"What news on Mr Murdoch?"

"I'm coming in. I'll tell you all about it."

It turned out that Maxwell Murdoch IV was a big name in the States, owner and Chief Executive Officer of the giant Southern National Generation company. His great-grandfather had started the family business, building infrastructure to support the expanding railroad network as it brought supplies to the frontier edging progressively and violently westwards. Family lore had it that the original holder of the name was killed by a Pawnee arrow defending a locomotive depot against the red hordes near Tulsa, Oklahoma. Perusal of contemporary newspapers told a different story. With a few variations, the gist was that Maxwell Murdoch I met his end at the hands of

the husband of the Pawnee wife he was caught *in flagrante* with in a cheap hotel. Some reports added that the wife also met her grisly end in the same manner.

Maxwell Murdoch II had exploited the demand of the burgeoning American industrial economy for electrical power plants at the start of the twentieth century, with his eldest son following in his footsteps.

The fourth bearer of the name showed himself possessed of the same fanatical business acumen of his predecessors seasoned with a flamboyance that some said strayed into wildness. Married three times, divorced twice, according to the sources Verity had consulted. She herself had unearthed a newspaper article about Mr Murdoch in the University's Bodleian Library archive. The article in the *Washington Post* included a photo of the 60-year-old entrepreneur, showing a portly man with a full mane of white hair and a moustache and goatee beard to match.

The article revealed that Maxwell Murdoch IV was a supporter of the Republican Party and a leading voice in the controversial Righteous Warriors of America organisation, whose policy on the Vietnam War was that it must be won by the anti-Communists at any price. Their creed was that God demanded nothing less, even if the enemy had to be tamed by tactical nuclear weapons. The Post also mentioned two assassination attempts on Mr Murdoch, in one of which a rifle bullet had clipped an ear.

"Sounds quite a character," said Toni now as they neared All Souls Church for choir practice. "It wouldn't be boring, working for him."

"It might be a bit too exciting for someone my age," said Madeleine. "But if I don't go, he may not want the post grads without me, so I'd be letting them down."

"When do you have to decide?"

"I can't imagine Maxwell Murdoch hanging around a long time waiting for an answer."

"Perhaps the Lord can guide you," said Toni. Her landlady threw her a quick glance to confirm her tenant's tongue was in her cheek.

"It would be more useful if we knew what his plan was for Nigel's mother," muttered Madeleine.

"Right," said Toni. "Let's go and sing his praises," waving to fellow choir member Daphne Edwards as they approached the church, "even if we don't believe in him."

"Amen."

CHAPTER 12

Choir practice was conducted in the church hall, a modest single storey building standing alongside the graveyard. Attendance this Friday evening was about average, with seven choirboys and Toni Clark singing treble, four altos, five tenors and four basses. The company included only four females since one of the altos was Albert Landred, who could manage around three quarters of the vocal range of the ladies. Two of the tenors were adolescents, ex-trebles whose voices had only recently broken and whose pitch control could therefore not be guaranteed. Choirmaster Benedict Avery did not hide his exasperation at the occasional departures from tonal accuracy.

Gregorio Allegri's "Miserere" had initially caused ructions for the choir of All Souls, Woodstock. Some of the choir members had been pressurising Mr Avery to let them add it to their repertoire for quite a while. His response was: "When you're good enough". Believing this ploy was merely a device for enforcing

attendance at choir practice alto Daphne Edwards responded with her opinion that the choir had already achieved the necessary standard. Whereupon the choirmaster had modified his requirement to: "When I think you're good enough". Daphne and her alto colleague Jean Coster had taken to visiting the homes of the choirboys whose enthusiasm for the Friday practices was patchy to persuade their parents to persuade them to attend. But soon after rehearsals began for the 16th century chant the need for cajoling the less dedicated choirboys had faded when they realised they loved performing it.

This Friday evening the trebles didn't mind when Mr Avery required them to sing a few bars of their line by themselves to verify accuracy, their confidence reinforced by Toni's contribution. By contrast Daphne and Jean bristled when the choirmaster expected the altos to subject themselves to the same discipline. When they asked Madeleine Maunsell to support their cause the chemistry professor diplomatically replied that she herself had no objection to the choirmaster's demand. Fellow alto Albert Landred, sitting quietly and expressionless at the end of the row, concurred with Madeleine. His unprepossessing demeanour suggested bank clerk or teacher. In fact he was one of England's most highly rated heart surgeons.

"Well, ladies, it's your choice," said Mr Avery now. "You can sing me your part or we can cancel the whole thing."

"That's blackmail," said Jean.

"Correct," said the choirmaster.

"It's demeaning," said Daphne. "You're challenging our professionalism. We've told you this before."

The young choristers watched the disagreement with the thinly disguised glee that always derives from seeing adults arguing with each other.

Bass Matthew Claridge spoke up. "Come on, Daphne. He's not asking you to give blood. It's just a bit of warbling. The boys have done it and we'll be doing it too. We all know you can sing like a lark so there's nothing to be frightened of."

"I'm not frightened of anything," said Daphne haughtily.

"Okay, we'll do it . . . under protest," conceded Jean, putting her hand on her colleague's arm to placate her and prevent further argument.

"Hallelujah!" muttered Mr Avery.

The altos successfully negotiated twenty odd bars of the work and the choirmaster smiled, almost without sarcasm.

"See, it didn't hurt, did it?"

"Nicely done," commented Toni, twisting round from the front row to address the altos.

"I'm sure we don't need your approval," said Jean. But sitting next to her Madeleine responded more firmly and pointedly: "Thank you, Toni."

"Right," said Mr Avery. "You tenors can have a go now."

The next fifteen minutes of rehearsal passed without any difficulty and the beautiful music soothed the souls of everyone present. During a pause Jean tapped Toni on the shoulder and apologised for her earlier rudeness.

"That's cool, baby," said the TV producer.

The cheerful arrival of the plump Mrs Partridge signified imminent tea break. It was the parishioner's duty to meet the catering needs of the singers, dispensing tea or coffee or soft drinks and biscuits.

As they sipped their tea seated a little apart from the others Toni asked Madeleine about John Davis. Typically she launched straight into personal questions without preamble.

"So come on, Madds, have you bedded him yet?"

"I see you've picked up American ways during your sojourn in California," observed the professor a touch ruefully. "No attempt at subtlety."

"Evading the question. Does that mean you have?"

Madeleine looked directly at her tenant. "No, I haven't. Both times he stayed over you were at home too, remember?"

"So if I hadn't been there you would have shagged him, is that what you mean?"

"No, Toni, that's not what I meant."

"Do you want to?"

"He hasn't suggested it."

"Another evasion, Maddie. What would you say if he did suggest it?"

"It would depend."

Toni laughed. "If you don't want him, I'll have him. He's quite dishy in a quiet, refined sort of way."

"Shall I tell him you fancy him?"

"If you're not interested I'll tell him myself. When's he next coming over?"

"Not sure. He's away at the moment and we haven't arranged anything definite for when he comes back . . ." Madeleine's response faded out because Matthew Claridge had come over for a chat.

"How was America, Toni? Don't think I've had the chance to talk to you since you got back."

"Fantastic, Matthew. It's all happening over there."

"Making a film, weren't you?"

"Yeah, the Hippie Movement."

"My son wants to go next summer, so he says. But I'd be worried. They're all taking drugs and riding huge motorbikes from what I can make out."

"How old's your son?"

"Seventeen . . . eighteen next year."

"Will you let him?"

"He says he can travel across the country for free. Apparently students can get jobs delivering cars when their owners are flying from one place to another. My son says he and a friend want to do New York to Los Angeles, which is a common route according to him. They don't get paid but the petrol is paid for and they're given so many days to complete the journey."

"Sounds like fun," said Toni.

"I told him I'll think about it."

"Well, the hippie thing might all be over by next summer. No one knows how long it's going to last or if it'll change. At the moment it's all good, well ninety percent anyway. Yes, there are some people hanging around dropping acid but they don't cause trouble and the odd spliff never hurt anyone. The mood is peace and love."

"And stop the Vietnam War."

"Yes. We filmed a few demos."

"But LBJ's not happy, judging by the news reports."

"The Government are worried 'cos they can't control what's going on. I just hope it doesn't get nasty. Some right-wingers are getting themselves agitated. That group Maddie was telling me about earlier—"

"The Righteous Warriors?" offered Madeleine.

"Yeah. Shame I didn't know about them while I was over there. I could have brought them into the film. I might insert a bit about them later if it's possible."

"When's the film coming out?" asked Matthew.

"It's being edited now. They're talking about the end of the year. Apparently the lawyers have to see the final cut before it's released—make sure no one can sue us for defamation or slander. They're very litigious, the Americans."

"What's it called?"

"Provisionally 'Flowers in Your Hair'. That's the title I want. The Emcro executives will have the final say."

"Anything else in the pipeline, Toni?" asked Matthew.

"Yes, we've started work on a new drama about the mining community in Northumberland between the wars. It'll be a class thing—there'll be a posh family involved too, servants and all the rest of it."

"Sounds interesting. TV or cinema?"

"TV series. The first episodes are being written."

"Workers against the toffs, then," chuckled the bass singer.

"Yes, but the main characters are two schoolgirls, daughters of miners. Everything hinges round them."

"I'll watch out for that." Matthew lowered his voice a little. "You've made your peace with Daphne and Jean, I hope? I noticed the little upset earlier."

"It was nothing. Storm in a teacup."

Madeleine also spoke quietly. "Daph told Toni off when she suggested that most of the hymns we sing are just Victorian pop music."

The bass laughed. "Haven't heard that one before. What do you mean, Toni?"

"Take a look through the English Hymnal. Half the hymns were written during the Victorian era. Snappy, simple tunes to which various people wrote lyrics, some artistic or poetic, but a lot of the words are trite, some just plain drivel."

"Don't tell our lady altos that!"

"Actually, Benedict said as much once during an unguarded moment," continued Toni. "But he thinks of the human voice as just an accompaniment to the music. He reckons you can turn anything into choral music, even a shopping list."

Madeleine smiled. "What about the Periodic Table? Could he set that to music?"

Matthew frowned. "Something to do with chemistry, isn't it? Seem to remember it from schooldays."

"Yes, it's the elements listed by increasing atomic number," said Madeleine.

"Don't tell me," said the bass, screwing up his eyes. "Hydrogen, helium, beryllium, boron, nitrogen, carbon—"

"Very good," laughed the professor, "except you missed out lithium and carbon comes before nitrogen."

"Can't imagine Jean and Daph singing along to that, somehow," chuckled Matthew. "They're not happy when their irreverence detectors activate. Sometimes the choristers deliberately sing daft words just to annoy them."

"Yes, I remember one of their joke hymns," said Madeleine. "We were doing 'Praise My Soul the King of Heaven'. What did the boys sing?—'Braise my vole, said Tim to Kevin'. Daphne didn't like that." Timothy Watts and Kevin Hall were two of the choristers.

"They wanted to throw me out of the choir, remember?" said Toni, "when they found out I was a non-believer."

"What's that group you belong to?" asked Matthew. "Atheists for God, something like that, isn't it?"

"The Secular Christian Society," said Toni. "We like J C's ideas as a social code but don't go for the Son of God stuff."

"Peace and love," offered Madeleine. "A bit like what's going on in San Francisco, judging by what you've been telling us."

"I agree," said Toni. "It's another form of socialism, just like the hippies."

"Jean and Daphne are staunch Tories," smiled Matthew. "If they suspected you were dallying with the comrades they really would chuck you out."

"Yes," said Madeleine, a little conspiratorially, "All Souls is very much a middle class church. No lefties or poor people allowed here."

"Yeah," said Toni. "Suppose a bloke of Middle Eastern appearance with long hair and a beard showed up."

"Riding on a donkey!" added Madeleine.

"They'd have a fit."

"Probably call the police."

"Maddie, you're just another subversive!" laughed Matthew. "I'm away before you corrupt me!" He ambled off to talk to other choir members.

"I'm also in trouble with Mrs Vicar," said Toni to her landlady.

"Don't tell me . . . hats!"

"Got a right bollocking last Sunday for not wearing one."

Yvonne Kenney, wife of the Reverend Godfrey Kenney, was known to be a stickler for correct dress in the place of worship. Ties for the gents and hats for the ladies.

"Standards must be maintained!" said Madeleine sarcastically.

"She's a snobby cow," said Toni, "but I'm thinking I might get my revenge."

"How?"

"Seduce Godfrey."

"What!"

"I know he fancies me. I might ask him for a bit of one-to-one religious instruction. Tell him he can try to convert me. You know—laying on of hands, and all that. And laying on of other parts, too."

"You wouldn't!"

"I might."

"You're awful!"

"That's me!"

Before Madeleine could think up a reply the choirmaster's voice sounded across the hall.

"Okay, everyone, it's back to work. You don't deserve it but I've decided we'll do Harwood this Sunday. We'll do the Agnus Dei now for practice. Let's see what a mess you make of that."

"Hooray," cheered several of the choir members.

CHAPTER 13

If you had to be stuck on your own somewhere away from home there could be worse places than Honolulu, Hawaii, thought Senior First Officer Rod Smith. Especially when you were a guest at the Holiday Inn, Waikiki Beach, at the expense of your employer, the British Overseas Airways Corporation. Especially when you could spend your time sunning yourself on the beach, drinking a cold Michelob and watching golden-skinned, bikini-clad girls splashing along the water's edge. Further out the huge rollers were sweeping surfers towards the shore. Rod could hear their shouts—whoops of delight from those who had successfully caught the wave and yells of frustration from the unfortunates who had wiped out.

In the nature of these things, Rod's enforced stopover had begun with a rostering problem back at Heathrow. Several crewmembers had succumbed to the early winter flu bug currently ravaging Britain, leaving the airline temporarily short of pilots, copilots

more so than captains. Frantic swapping of crews by roster personnel had just about managed to keep the programme going as scheduled but at the cost of disrupted lives for those involved. Last minute changes meant that crews assembled and broke up more frequently than usual. Rod was one of those on leave who had volunteered to help out. He had arrived in Honolulu two days previously and would join a homeward bound crew the next day. There wasn't enough time to organise child care for his two kids which meant that his wife, Miranda, couldn't accompany him on a staff standby ticket. Besides which, as Miranda had said herself, for a three-night stopover, not to mention three days flying each way to get to Honolulu and back, it was hardly worth the effort of trying to sort everything out.

Rod looked at his watch. 1130. He would not be alone much longer. If he was running to time, Senior Engineer Officer Frank Armitage would soon be joining him. Frank had been travelling as a passenger on the 707 which Rod and his crew had brought in from Los Angeles. A crew rearrangement left Rod on the Hawaiian island while the others flew back the next day with a different copilot.

Visiting the flight deck on the leg to Honolulu, Frank had told the crew he was heading for Hilo for a ten-day holiday with an old American friend. But during his time there he and the friend and the friend's son were going to fly over to Waikiki for two days so that the boy could practise surfing. The American was a Convair 640 captain on Hawaiian Airlines so deadheading between the islands was easy to

arrange and cost free for himself and his friends and relatives.

Rod was about to pick up his copy of the *Pearl Dispatch* local newspaper when he spotted Frank walking along the beach towards him, accompanied by a man wearing a baseball cap who looked to be of a similar vintage to Frank and a slender youth whose age would have been mid-teens, thought the BOAC copilot.

"What ho, young Rodders!" called the flight engineer as the trio approached. He was wearing a straw panama hat more suited to a country parish vicar than a master of the technical systems of the Boeing jetliner.

Rod stood up and held out his hand. Frank made the introductions.

"This is Stan Hazzard, seniority number three on Hawaiian, so max respect, please!"

"Pleased to meet you, Stan."

"Sure, you too. This is my son, Carl."

"Champion surfer," said Frank.

"Not yet," said the boy, "but I'm working on it." He pointed out to sea at a group of brown-skinned local boys expertly riding a roller towards the beach. "Those kids are better than me and they surf on tea trays."

The four repaired to a nearby burger bar and Rod ordered three beers and a Coke. The group sat themselves down at a table in the shade.

"Just remind me how you two know each other," said Rod, looking at Frank and Stan.

"As I told you, we first met during the war," said Frank. "Stan was a B17 driver based at Alconbury. But the powers that be decided that some of the Yanks should get checked out on our heavies and vice versa. So Stan and some of his chums converted onto Lancs and some of our boys flew the B17. The idea was cross-fertilisation of operational techniques or some such nonsense. Stan was on 625 Squadron with me. We flew a few missions together."

"That's right," nodded the American. "Half a dozen or so, I guess."

"How did the Lanc compare to the Fortress?" asked Rod.

"We were impressed," said Stan. "Both types had their good points and bad points. The Lanc was faster and could carry more ordnance but was stuck in the lower levels and couldn't defend itself so well. The Seventeen could fly higher and bristled with guns but couldn't carry as much."

"Loads of guns, yes," said Frank, "but the Jerries quickly found the blind spots, so they were easy meat until the Mustang came in to protect them."

"True enough," agreed Stan, "but we were attacking in the daylight so it was easier for the bad guys to find us."

"Any nasty moments?" asked Rod.

"Plenty," said the American. "But at least we lived to tell the story. Plenty of our buddies didn't make it." He laid his hand on Frank's shoulder. "This man here saved me and my crew after the Essen raid."

"What happened?" asked the BOAC copilot.

"We got hit by flak and I got knocked out. Frank took over and flew the ship home. Next thing I knew I was in hospital with bandages all over."

Frank grinned. "I'm one of the few airmen in the world whose number of landings exceeds his number of take-offs—one and zero respectively."

"They gave you a medal, didn't they?"

"It didn't mean much. They dished them out with the rations."

Carl looked over, impressed. "Hey, that's cool. I remember Dad telling me about that before. So you're the one who landed the plane when Dad was unconscious?"

"Yessir. But it wasn't the best landing in the world. The port undercarriage collapsed."

"Jeez, man," said Stan. "You had one engine out, one misfiring and damaged flight controls!"

"I got a lot of stick from the rest of the crew."

"In jest!"

"I think so."

"They had to scrap that ship as I recall. Too badly damaged."

"Blame the Germans, not me!" said Frank, bringing grins from the others.

"I remember they brought us a replacement," said Stan. "The delivery pilot was a girl—that lovely Madeleine something-or-other. She was absolutely gorgeous. I met her a coupla times on the squadron and I fell for her."

"Is that Nigel Nixon's sister?" asked Rod. "She was in the ATA, wasn't she?"

"The very same," replied Frank.

"I remember asking her for a date," said Stan, "but she was already taken, she told me."

"She was engaged," said Frank. "But her fiancé went for a Burton on a Dortmund raid, as I recall."

"Did she find anyone else?"

"No, I don't think so," said the flight engineer. "No one permanent, anyway. She still goes by her maiden name."

There was a pause. Carl drained his Coke and stifled a burp. "Say, Dad, is it okay if I go and grab a board and shoot the curl?"

"Sure, son. I'll be catching a cab into town in a while, buy some fishing gear. I'll meet you back here at five. That suit you?"

"Swell." the youth stood up and offered his hand. "If I don't see you again it's sure been great meeting with you, Rod. Enjoy your stay."

"Do you ever meet Madeleine?" asked the American of Frank, picking up the earlier conversation after the youth had left.

A shake of the head. "No. I fly with her brother quite often. He's a skipper on the 707. He sometimes mentions her in conversation."

"What does she do? I mean—does she work?"

"She's a science professor at Oxford University. Runs a research facility."

"Wow, that's impressive. So she quit flying after the war?"

"Yes. I think she flies puddle-jumpers now, as a hobby."

"So you live in Hilo?" asked Rod, looking at the American.

"Yeah."

"Stan's got a lovely house on the sea front," said Frank. "With his own boathouse and jetty."

"Sounds good. And you fly for Hawaiian?"

"Uh, huh."

"The 640 will be just local flights, then," said Rod.

"Yeah, island hopping. It's okay. Pays the bills."

"No long haul?"

"Nope. There's talk of a coupla leased DC8s coming in to do flights to the mainland but I think it's just wishful thinking among some of the younger guys."

"Seniority number three—you'd be on the first conversion course, Stan," laughed Frank.

The American shook his head. "Not for me, thank you, sir. How do you think I shot up the seniority list? All the guys above me went off to fly bigger equipment on longer routes with other companies. I've done my share of droning over the oceans on the old piston Dougs. This suits me just fine. Anyway, I'm too old to convert onto the jets. They're way too fast for me. My brain works at propliner speed."

"Rubbish!" snorted Frank. "We had chaps converting onto the 707 and the VC10 who were the far side of fifty, much older than you."

A waiter came over and took their order for another three Michelobs.

"You're starting a command course soon, the rumour machine has it," said Frank to the copilot.

"Yes, in the New Year if all goes to plan."

"Just remember, Rodders, to treat your flight engineers with respect when you swap to the left seat."

The copilot laughed. "Of course. You know, I could never understand why some captains treat other people like dirt. No names and all that. They upset their first officers, their flight engineers, the cabin crew, the dispatchers, the ground engineers, you name it. I always thought what's the point of annoying people who could help you? It's the bleeding obvious really."

"I think it's more likely in pilots who got early promotions," offered Stan. "They forgot what it's like to be a cojo. I reckon the way to do it when you're dealing with other people is to ask yourself how you're being assessed. Are you coming across as a decent, reasonable guy or a complete asshole. Some guy once told me—whatever job you're in, ten percent of people are shits."

"There are one or two of the latter category in the Corporation," said Frank. "As Rod says, no names—no pack drill."

"I've been in the right seat nearly ten years," said Rod, "so I've had plenty of time to watch how captains do their stuff. You incorporate the good points into your own operation and make sure you never follow the bad examples."

Frank tapped his chin. "The last time you and I flew, Rod. That was with Soapy Nixon, wasn't it? We had that young kid doing his Flight Nav course with us. Soapy is one of the best, I would say."

The copilot nodded enthusiastically. "I agree. A joy to fly with. I did a trip with him just after the command course bid result was published. He gave me nearly all the take-offs and landings so I could get my hand in."

"Soapy?" queried Stan.

"He's unable to complete a sentence without including the word 'SOPs'," grinned Frank.

"As in Standard Operating Procedures?"

"Correct."

The American pilot chuckled. "I'm told the 707 handles just like the dear old Seventeen. All Boeing designs are the same, they say. You make a control input and half an hour later the ship responds."

"I love it," said Rod.

"Me too," agreed Frank. "But you pilots are so fickle. Suppose they offer you the VC10, Rodney. What then?"

The copilot screwed up his eyes. "Difficult one, Frank. The chaps on the Ten love it as much as we love the 707."

After a few more minutes aviation chat the American announced that he was headed Downtown for some fishing tackle.

"Seems like a nice chap," said Rod as the two Brits watched Stan climb into the taxi he had just waved down.

"Yeah, I'd say so," agreed Frank. "Not quite as brash as some of his countrymen."

"Nice that you kept in touch after the war."

"Yeah, we've been friends for over twenty years. He used to live in Cincinnati but after his divorce he

met a Hawaiian girl and came to Hilo to live with her. Lovely girl. I get to stay with them once or twice a year. Go out fishing or sailing. Not a bad life."

"Does Carl live with them?"

"No, lives with his Mum in Cincinnati. But she's happy to let Carl come over during the school holidays whenever he wants to. Stan says he gets on better now with his ex than when they were married. Seems to happen a lot in the States. Couples divorce then carry on as friends."

"Sounds okay."

"I think he worries a bit about Carl," said Frank. "Stan wants him to join the military as an officer when he's old enough but the boy doesn't seem very keen. And back home Carl's been on a few anti-war demos, which Stan's not too happy about. I told him it's just the rebelliousness of youth and he'll grow out of it."

"He seemed okay to me," offered Rod. "Presentable appearance, good manners."

"Anyway," said Frank, "if the Vietnam war continues Carl will probably be called up whether he likes it or not."

"Poor sod!"

"He'll be fine, I told Stan. It's not the end of the world that he doesn't want to follow his Dad into the Air Force. Maybe he'll change his mind if he gets drafted. It's a generational thing, I think. Neither of my two boys are that way inclined either. They're both pleased National Service has finished."

"Bit of a Curate's Egg, National Service," said Rod. "A lot of people reckoned it was just a chance for psychopathic corporals to bully callow youths but I got

into aviation through National Service. His Majesty's Government were kind enough to train me to fly his aeroplanes and pay me for doing it."

"It's all different now," said the flight engineer ruefully. "The idea of fighting for your country seems sort of old fashioned and unsavoury."

"All you need is love!" laughed Rod. "That's what we hear these days."

Frank smiled back. "Maybe the kids are right after all. God knows there's been enough killing the last fifty years or so. Anyway, Stan's an easygoing sort. He won't push Carl where he doesn't want to go."

"So he met Nigel Nixon's sister. Small world, aviation."

"You're right. I'm not surprised he fancied her. But she was a lovely lady, it has to be said. I bet there weren't many males who met her who didn't fancy her, me included. I wonder what she's like now—I haven't met her in years. It's funny, you know. Nigel always talks about her affectionately but when they were younger there was some sort of bust up for a while."

"What do you mean?"

The flight engineer took a swig of Michelob, apparently gathering his thoughts. "It might have been a family thing. I remember Nigel telling me about their parents splitting up around the time Maddie was born. But I'm thinking of White Waltham."

"What, the ATA?" queried Rod.

"Yes," said Frank with a nod. "Nigel used to bring a Tiger Moth into Waltham when he was on ground duties between tours on the Lanc. This aircraft had a

retractable hood fitted over the rear seat so people could practise instrument flying. Not many of the ATA guys and gals had had formal IF training and we were losing them in bad weather so quite a few of them took up Nigel's offer of stick time under the hood."

"Did it work?"

"Certainly—later on it became compulsory. In fact Maddie and one or two others took on the instructing role. Useful after Nigel started his second Lanc tour, which meant he couldn't get to Waltham any more."

"So what was the upset between them?"

"It was when Nigel was training Maddie to instruct IF. They were doing night circuits. I was at Waltham on a temporary posting training ATA bods as flight engineers for ferry flights. Anyway, they finished the detail okay and we were expecting them to join us in the bar for a night cap but they didn't show up. No one thought anything about it but next morning at breakfast they were at loggerheads, not speaking to each other or anybody else."

"How strange."

"Quite, Rodders. Anyone asking Nige why they were so grumpy was told to mind their own business. Maddie wouldn't say anything at all so we left them to it. After a few days the disagreement seemed to be over and they both apologised for their rudeness and bought everyone a round of drinks."

"So did anyone find out what had happened?"

"Nope. There were rumours that it was an argument about instruction techniques. After that there was a sort of . . . coolness between them, which was a bit out of character for both of them."

"What about now, Frank?"

"Like I said, all systems normal these days, or so it seems. They meet each other quite frequently and go together to visit Nigel's Mum in her care home although I think I heard somewhere she's had a stroke and she's in hospital now."

"She sounds quite a character, Nigel's sister."

"You'd like her if you met her. Nigel told me she's still unattached. I'm surprised no bloke has snapped her up. Last time I saw her she still had her looks and her charm."

"How old is she?"

The flight engineer furrowed his brow. "Let's see . . . she'll be two years younger than me and Nige. That'll make her forty-five or thereabouts."

"Past her prime, maybe."

"Can't imagine that, Rodders."

CHAPTER 14

Among the fifty-three passengers waiting for their cases to appear on the baggage carousel at Adams Airport, Little Rock, was Professor Madeleine Maunsell. Standing beside her was Mike Snow, who had met her when she came through Arrivals. More specifically, she had introduced herself to him after spotting him holding up a placard on which her name was printed. Mike was the thirty year old pilot of the Jet Ranger helicopter sent by Southern National Generation to pick her up and ferry her to the industrial area of Strumble, a nondescript town lying twenty odd miles to the northeast of Little Rock. To Madeleine the helicopter seemed a terrible extravagance when a car could make the journey in half an hour. She was obviously not yet fully accustomed to American ways.

It had taken Madeleine the best part of two days to travel to the heart of Arkansas. The previous day a Pan Am 707 had carried her in first class comfort from

London to New York, where Southern National had paid for her overnight stay in the luxurious Paramount Hotel in Times Square, accommodation noticeably superior to that provided for her during previous visits to the city for scientific conventions.

Today's travel arrangements were not quite so expeditious. A Pan Am 727 took her to Washington, where she changed to a Braniff DC9 which had brought her via a brief intermediate stop at Nashville to the Arkansas state capital.

Mike carried her suitcase to the helipad and soon the machine was airborne and tilting its rotor towards Strumble, following Highway 67. Included among the documents in the professor's briefcase on the seat behind her was a copy of the map Maxwell Murdoch had previously sent her via Oxford University's newfangled telephone facsimile device, entitled 'SNG Generating Plant, Strumble, AR'. The plan view showed the layout of the various components of the coal-fired power station, of which the dominant feature was the six large cooling towers. A dotted outline extending from the main plant encompassed a blank area labelled only 'Extension'. In a phone conversation with Madeleine prior to her departure from England Mr Murdoch had mentioned his plans for the 'extension' without giving away too much detail. No doubt she would find out more when she met him.

Although a thin overcast filtered out direct November sunlight the visibility beneath the cloud was good and soon after the sprawl of Little Rock had drifted behind the Jet Ranger Madeleine spotted the

steam clouds lazily billowing from the cooling towers poking up from the horizon ahead of them. As they descended towards the landing pad at destination Madeleine commented on the mile-long coal train trundling towards the power station on tracks converging from their right side.

"Me silly jet," is what Madeleine thought the pilot said in response.

"Pardon?"

"Miss Illy Jet," said Mike, enunciating more clearly for the benefit of the English lady who spoke a different version of the language of America. "It's short for 'Mississippi Illinois Railroad'. The coal train is the 'jet'."

"So does the 'jet' name derive from the cargo?"

"Excuse me?"

"Jet . . . as in black."

Over the intercom Madeleine heard Mike chuckle.

"Hey, I never thought of that! I assumed 'jet' was a—whaddy call it?—ironical name 'cos they're so slow."

At the head of the train crawling along the tracks could be seen three big diesel locomotives. Madeleine vaguely wondered whether any British freight trains needed the power of three engines to drag them along. Not for the first time she marvelled at the increased scale of all things American compared to their European counterparts.

"That load probably originated in Texas," continued Mike, manoeuvring the helicopter as they dropped lower to stay clear of the cooling towers and the electricity pylons radiating from the power station, "but

a lot comes in from the north, from Wyoming." He chuckled again. "The joke about the Miss Illy is that their trains run slower than the rivers it's named for."

As the Jet Ranger settled on its skids and Mike lowered his collective to kill the rotor lift Madeleine noted three people waiting to greet them, hair and clothes rippling in the helicopter's downwash. The central figure was obviously her host, taller and more corpulent than the other two, a man and a woman standing either side.

Madeleine stepped out of the aircraft and walked forward to the trio, holding out her free hand, which Mr Murdoch grabbed and shook vigorously. Wearing a beige suit, he was sporting a moustache and goatee beard matching his mane of white hair, reminding the professor of the photos Verity had dug up when they were researching his background.

"Hey, Madeleine, great to meet with you at last. Welcome to Strumble. How was the flight?"

"Okay, thanks."

"Swell . . . let me introduce you to the guys who run things around here." He pointed to the suited middle-aged man on his right. "Dave Montgomery, my personal assistant. He knows all my secrets . . . well, nearly all of them!" The hand then swung leftward towards the woman, who looked younger, also smartly dressed. "Nedra Springfield, General Manager. She's the boss here at Strumble."

Mike Snow had completed his shut-down checks and approached the group, carrying Madeleine's suitcase.

"Am I to take this to your office, sir?" he asked.

Mr Murdoch turned to Madeleine. "Anything you need from the case right now?" he asked.

"No, thank you."

"Okay," he said to the pilot, "get my chauffeur to take it straight to the hotel, would ya?"

Ensconced round a table in Nedra's office ten minutes later the foursome got down to business.

"You happy with the itinerary, Madeleine?" asked Mr Murdoch. "Anything you want to change?"

The arrangement was for the chemistry professor to stay at Strumble for two nights, then three nights in Wilmington, then home via Norfolk, Virginia. At Strumble she would be briefed on the power plant and the mysterious "extension" and at Wilmington she would visit Southern National's headquarters and discuss additions to the research facility.

"Right," said Mr Murdoch. "First things first. What we talk about here is strictly confidential. All got that?"

Three heads nodded concurrence.

"You want minutes, sir?" asked Dave.

"Yes, but no one gets to access them apart from us four. Lock 'em up when we're done."

"Got it."

"Okay, the big picture. The task is to remove as much carbon dioxide as we can as soon as it's generated by the combustors before it gets into the atmosphere. We react it with methane which we get from natural deposits and turn them into hydrogen and carbon monoxide, which can then be used as fuel or for other purposes. The big problem is you have to heat these gases to thirteen hundred degrees to get them to react, even when you're using a catalyst."

Madeleine was about to correct him, to tell him the required temperatures were much lower. But then she remembered he was quoting Fahrenheit figures in the American way.

"If we generate the temperature by burning fossil fuels then the whole exercise is pointless," continued Mr Murdoch. "We'd be pumping out more CO₂ than we were removing."

The CEO of Southern National paused, his eyes scanning his small audience.

"So . . . we heat things up with nuclear power."

There was little reaction to the words. Madeleine had already guessed what was going to be proposed from the hints Mr Murdoch had previously dropped and no doubt Dave and Nedra had been pre-briefed.

"Here's the deal," continued Mr Murdoch. "We build a small nuclear reactor here as an extension to the main generating plant. My guys at Wilmington think we could use the sort of reactor Westinghouse are putting in submarines. Maybe we could even buy one from them but we might have to clear it with the Department of Defense. If they're not happy we'll build one ourselves, a baby version of the reactors currently in use at power stations."

Another pause. "Any questions so far?"

"What catalyst will you use?" asked Madeleine.

Max Murdoch grinned. "What do you suggest, Professor?"

"We've tried various things," replied Madeleine cagily. After agreeing to accept Mr Murdoch's invitation to meet him in the States she had discussed confidentiality with John Davis, who had reminded her

that part of the Science Research Council's funding contract specified that no research findings could be released into the public domain without the Council's approval. There were two reasons for pursuing this policy. Firstly, there might be military applications which could take advantage of new discoveries or advances in technology and secondly the Government rightly expected a return on investment if research led to successful commercial developments. In the case of reformation of carbon dioxide by methane, no catalyst had as yet outperformed the tungsten carbide-palladium hybrid her post grads had invented. The big problem was that on an industrial scale the quantity of catalyst required would be prohibitively expensive.

John Davis had given Madeleine discretion as to how much she should reveal. They knew that if too much data was withheld the American might abandon the whole project, which would signify its death as no other definite sponsors had been found to date and the Review Board had already confirmed that no new Treasury funding would be available after mid-January. Several meetings between interested parties, some less than friendly, were required to hammer out the decision that the seventeenth day of the month would see the flow of cash cut off.

"Give me a clue," smiled Mr Murdoch now.

"On an industrial scale it would probably have to be nickel," said Madeleine, knowing that this offering was hardly a revelation and that the American would already know about it. "On cost grounds there would be no alternative."

Mr Murdoch nodded. "Yeah, that's what my d-block guys say."

The professor furrowed her brow. "D-block?" Vague notions of prisoners conducting research for Southern National filtered into her mind.

"Transition metals, honey," grinned the American. "Hell, you're supposed to know about these things, you being a professor and all. Didn't you win prizes for that stuff? That's what I was told."

Madeleine smiled. Another Americanism. They certainly had a way with words, condensing convoluted phrases into pithy abbreviations. So the group of researchers investigating the properties of elements whose highest energy electrons occupied third level d-orbitals became "d-block guys".

"What about photon flux?" asked the professor. "Will electromagnetic radiation be included in the process?"

"I was going to check that with you," responded the CEO. "The Wilmington guys tell me that although the reactor will supply all the energy we need they think it's worthwhile looking into whether we can reduce the energy requirement using electromag and pressure variations so we can minimise the reactor size. I've told them the target is to find the best combination of inputs compatible with minimum cost and complexity."

"Seems sensible," said Madeleine. "We found that photons in the UV energy range boosted yield slightly so perhaps more work could be done on that." She looked down at her notes. "Would you go for steady state or alternating periodic flow?"

"Wilmington says steady state would probably give the best results overall. Is that what you Oxford people found?"

"Pretty much," nodded Madeleine, "depending on circumstances."

"Okay," said Max. "Now—we need to talk about gas separation. Like you, we're thinking about membrane separation of CO₂ from the exhaust flue gases so we can fry it with methane. For it to work large scale the fans would have to be pretty large and there would need to be multi-layered membrane frames to capture a reasonable percentage of the CO₂. Maybe we could use centrifuges too. Maybe both to get the concentration we need. Wilmington says the molecular weight difference would make centrifuges viable. I've told them to find out what percentage of the flue gases we can shove through the membranes in practical terms. I'm sure those mighty brains can work something out."

"Yes, I think that's right," said Madeleine. "I haven't done a lot of detailed work on that. What are your thoughts about nitrogen compounds?"

"Yeah, Wilmington are looking at that too. At the moment it doesn't look like a big problem. Sure, there might be some nasty stuff coming out, but not enough to frighten the horses."

Madeleine tapped her pen on her notes. "As a matter of interest, how much CO₂ do you emit here?"

Mr Murdoch raised his eyebrows and turned to the General Manager. "You got the figures, Nedra?"

Nedra flicked through the papers in front of her on the table. "Well, we're burning just under three million

tons of coal each year. What's the conversion factor? I'm sure somebody told me once."

"Depends on the carbon content," said Madeleine. "The atomic weight of carbon is twelve and the molecular weight of CO₂ is forty-four. So if you're talking about ninety percent carbon content, burning a ton of coal will generate ninety percent of forty-four divided by twelve . . . say just over three tons of CO₂."

"It's a lot, isn't it?" said Mr Murdoch. "So here at Strumble we're belching out nearly ten million tons of the stuff every year. When you think how many power stations there are in the world . . ."

"Yes, and don't forget transport, too," added Madeleine. "All those internal combustion engines . . ."

"Yeah, infernal combustion engines, some people say," laughed Mr Murdoch. "But oil's not as dirty as coal, is it?"

"No, because you're also getting energy from the oxidation of the hydrogen component, but most of the weight of oil is carbon so the ratio is still roughly three to one."

"And nobody cares about it."

"Which is why I'm having trouble funding the reformation project."

"But we care!" said Mr Murdoch, raising his voice and banging his fist on the table for emphasis. "We care because the Lord told us to care. He told us to clean up the planet he created."

There was no response to the CEO's outburst. Madeleine formed the impression that neither the General Manager of the power plant nor Mr

Murdoch's personnel assistant shared their boss's divine inspiration, both looking ahead with polite expressionless faces. The chemistry professor found her thoughts straying to the Righteous Warriors of America, the organisation whose mission was to warn the human race of the consequences of its sins, especially communism and other ungodly follies. There was plenty of fire and brimstone enlivening the organisation's gospel. Judging by what she had read, Maxwell Murdoch seemed to be among the more moderate of the members. She cleared her throat.

"We were talking about conversion ratios, Max. From the plant's consumption of coal we should be able to work out the rate of CO₂ production." She lifted the flap of her brief case. "I've got a slide rule here."

Nedra turned a page in her notes and gave an embarrassed smile. "Sorry, folks, I should have realised. We've got that figure here. Wilmington says we emit approximately three hundred cubic feet of CO₂ per minute when we're working at normal capacity."

"So, is the intention to try to convert as much as possible?" asked the chemistry professor.

Mr Murdoch looked at his General Manager. "Nedra?"

"Wilmington are floating the idea that we run the CO₂ retrieved from the membrane filter through the catalyst chamber, adding methane in varying quantities to see what happens and finding the best setting. Maybe we could build in a recycling system to increase the exposure to the catalyst."

"How big would the catalyst chamber be?" asked Madeleine. "How much nickel would you introduce?"

Mr Murdoch grinned. "That's for you to tell us, honey!"

The exchange modulated into a general discussion of technical details, many of which would require Madeleine to consult the research personnel at Wilmington. At one point she asked the others whether the local populace were happy with Southern National setting up a nuclear reactor in their backyard. There was a momentary silence.

"We haven't told them yet," said Mr Murdoch finally.

"Oh," said Madeleine surprised.

Dave Montgomery spoke for the first time. "We don't feel the need to make a statement until the plans have been finalised," he said. "Then it will be for Mr Murdoch to decide the wording of that statement."

"We've got nothing to hide," said the CEO. "There are nuclear power stations with much bigger reactors all over the place. So we'll probably stress the boost to the local economy while the new installation is being built and the pride that will accrue from being a leader in this activity. And of course if it's the will of God that we have a nuclear reactor here, then so be it."

"Right," said Madeleine.

"Plus the mayor is a very good friend of mine. My dollars helped put him in office so we can rely on him to speak out loud and clear when the time comes."

"Excuse me, sir," said Dave. "You asked me to remind you about patents."

"Oh yes, good point, thank you." The CEO turned to the professor. "The legal factors on any patents we file depend on you, Madeleine. We have to determine in what capacity you're working with us. Have you decided whether you're joining us at Wilmington?"

Madeleine shook her head. "I'm sorry, Max, but I still don't know. For me the answer is—probably—if you still want me—"

"I want you!"

"Thank you. But my post grads I'm not so sure about. One or two might join me if I come over."

"Swell. That would be great. But you're the main prize. You'd be running the CO2 research unit at Wilmington. You could talk to our legal guys about your percentage of the ownership of any patents and the revenue deriving from them. On top of your salary, of course."

"Suppose I don't come to Wilmington but you still want me to do research for you back home."

"Either we write a one-off cheque paying you as a consultant or we adjust your revenue stream."

Madeleine smiled. "I won't keep you hanging on too long," she said. "You've been very patient and I promise to let you know within a few weeks."

"Great."

The CEO dismissed his assistant and the General Manager, telling them he had a couple of personal items to discuss with their guest.

"What do you think of our set-up here?" he asked when the others had left.

"Impressive."

"You'll like Wilmington, too. You'd be a great asset if you do decide to come on board. Plus our PR guys would love a beautiful, brainy English lady scientist in the team. I can just see your picture on the front page of our house magazine."

"Uh-huh."

"Okay. I'll get Dave to get the chauffeur to take you to the hotel and you can relax for a while."

"Thank you."

"Swell. I've booked a table for dinner this evening at the Pimiento. It's the best eatery in Strumble . . ." He lowered his voice conspiratorially, ". . . which isn't saying much. They'll be five of us. You, me, my dear wife Clarissa and Dave and Nedra. We'll pick you up at seven thirty."

"Sounds good."

"Oh, I almost forgot . . . you'll be meeting with Gordon McKenzie at Wilmington. He sends you his love."

It took less than a second for Madeleine's memory to retrieve the name and scan the highlights of their erstwhile relationship. "That'll be nice," she said neutrally. "I haven't seen him in years. What does he do at Wilmington?"

"Head of catalyst research."

"Ah, yes."

"I poached him from Harvard," chuckled Max. "That's where you met him, wasn't it?"

"Yes."

"He's a great admirer of yours."

"The feeling is mutual."

"Swell."

CHAPTER 15

The November sky was crisp and clear. The Piper Cherokee was cruising north-eastwards in the bright sunlight over Henley, indicated speed 120 miles per hour. The three ex-ATA pilots on board preferred to think in knots, as they had been trained to do a quarter century earlier. The true airspeed column on Parminder Collins' navigation log was accordingly annotated '105'.

Parminder and Prudence Dismore-Whyte occupied the front two seats, Parminder on the left side. Behind her sat Madeleine Maunsell, with the vacant fourth seat on her right piled with their bags. Madeleine had flown the outbound leg from Booker to Compton Abbas, the little grass airfield sitting on top of a hill four miles south of the Dorset town of Shaftesbury, so it was Parminder's turn to do the return leg. All three were wearing headsets but Madeleine was only half listening to the intercom exchanges between the front seat pilots and their occasional radio calls. She leant

over to watch the bend in the River Thames slide past beneath them on the right side.

"Wycombe," transmitted Parminder, "Golf Alpha Victor India Charlie, over Henley two thousand feet for joining."

"Roger, India Charlie" came the voice in their earphones. "Call downwind for runway two five, right hand pattern, QFE one zero zero eight, watch out for gliders and tugs."

On the intercom Parminder announced that she would turn left onto a northerly heading to take them west of the airfield for a join on the downwind leg.

"Sounds like a good plan," said Dizzy.

During the return flight Madeleine had been content to relax in the back seat, not paying much attention to what the other two were up to although her instinctive pilot training kept her eyes scanning outside for other aerial traffic that might conflict with their flight path. Under Visual Flight Rules it was up to them to see and be seen. The fine weather had brought out a few other like-minded pilots although, it being a Saturday, there was no military traffic to worry about.

As the chequered green and brown English countryside had floated past underneath the Cherokee Madeleine had been reviewing the latest developments in the Methane Reformation project. Not to mention episodes unrelated to the chemistry of organic gases.

Gordon McKenzie. Well . . . that was certainly not expected.

After their stay in Strumble Madeleine and the Murdochs had flown to Wilmington in Southern

National's brand new Gulfstream bizjet and she had marvelled at the glamorous turn her life had taken, such a contrast to the drab mundanities of English academia. No doubt the ulterior motive for Max's lavish generosity was to persuade her that her future lay in the good old USA.

At Wilmington Madeleine found herself impressed with Southern National's research facilities, especially the catalyst lab, where she thought the deference of the staff was delightful but a little overwhelming. Most of the experimental work revolved round investigating methods for cleaning up power plant emissions by catalytic processes. At the impromptu lecture she gave on her methane project her audience listened in rapt admiration, with applause and cheers at the end of it. That never happened at Oxford!

Gordon McKenzie was as she remembered him and the details of his life had not changed much, she discovered after having cautiously accepted his invitation to dinner at his sea front house for her second night in Wilmington. He was still unmarried because he didn't want family obligations. His hobby was racing motorbikes, he reminded her, and a grieving wife and heart-broken kids should he mess up would not be a nice thing to think about. Yes, he liked the company of women and no, he was not currently in a serious relationship.

Madeleine couldn't remember which one of them had steered the conversation towards their romantic fling at Harvard during a science convention several years previously. She had surprised herself by not immediately declining his invitation to stay the night

"for old times sake", which Gordon understandably interpreted as an encouragement to take things further.

As they started to kiss after post prandial cocktails delicious bedroom memories stirred for Madeleine. Gordon on top of her. Gordon underneath her. Repeat performances of same, with variations. All at once Toni's comment sprang to mind. What was it her lodger had wanted during her trip to America? Someone to shag her rotten, wasn't it? Was that where Madeleine herself was now headed?

No, it wasn't! Madeleine had suddenly decided before their intimacy passed the point of no return. Still breathless from energetic kissing she pushed him away.

"I'm not ready for this yet, Gordon," she said, voicing her genuine emotion. "I'm sorry for leading you on."

Gordon had not complained. On the contrary, he had stroked her cheek gently and told her that if she ever found herself ready, he would be willing and able to supply her needs.

Madeleine had wobbled for long seconds, wondering if she was doing the right thing, turning down the chance for sexual excitement after so long without.

Gordon had obviously sensed her confusion. "Don't do anything you may regret tomorrow," he had counselled her, helping her back onto safer ground.

"Thank you for understanding," Madeleine had responded. "I'd better get a taxi back to the Murdochs' place before I change my mind again."

Why had she turned Gordon down? That was the question which ran through her mind during the flight home to England. She didn't doubt his assertion that he would not be cheating on a partner if they had gone to bed.

There was the John Davis factor, of course. Or lack of John Davis. It was plain that John wanted to take things further in their relationship and she had told him there was a good chance she would eventually succumb to his advances but asked him not to rush her. But just as she had decided that yes, she was ready to give in, John's bosses had maliciously sent him away to Rio de Janeiro on a four month posting before she had a chance to let him seduce her.

So, was that why she had rejected Gordon? A sense of loyalty to a man who as yet knew nothing of her plans to allow their relationship to develop into something physical? And who was now happily living his life thousands of miles away. Who knew what romantic enticements would make themselves available to John in Brazil?

Was there a reason for her reluctance to embrace male physical intimacy that she was not admitting to herself? Perhaps she was subconsciously suppressing fears that she might not be capable of enjoying the act of sex. She'd had precious little practice in recent years! Perhaps as a forty-five year old woman she should give up the crazy notion of seeking carnal pleasures.

Did absence of love come into the equation? She had not shared a bed with someone she loved since . . . well, since the ATA days during the war. Perhaps it

was mere old-fashioned British primness that had kept her pure for most of the intervening years. Good girls do not sleep with men they do not love. Or who they are not married to.

Back home, unusually for her, Madeleine found it hard to decide where her future lay. Relocation to Wilmington would bring material benefits. And better research facilities. And the company of Gordon McKenzie in the lab and—possibly—in his bed. Even if she wasn't in love with him or wearing a wedding ring.

But she would miss her English friends and her brother. And her work colleagues. And the All Souls choir. And the bridge club. And flights with Dizzy and Pam in little aeroplanes. For all its drabness, there was a comfortable cosiness about English academic life which couldn't be defined and which contrasted favourably with the somewhat garish and superficial flavour of the American way. Also in the credit column was the potential offer from ICI of running a new project, looking at improving the physical characteristics of aromatic polyamide fibres by new methods of polymerisation. If it went ahead, the research would be funded by the chemical manufacturing giant, relieving her of the burden of running cap-in-hand to the Science Research Council whenever funds ran short.

And if she stayed in England, a returning John Davis might re-enter her life. And enter her body . . .

Lascivious ponderings aside, the position of the post grads was not much clearer, apart from James, who would not leave England while girlfriend

Stephanie was working in London. He told Madeleine he had applied for a post in a research project at Cambridge University looking at inventing new fabric dyes and had been informed the chances of acceptance were very good.

Xui Ying would almost certainly go back to Hong Kong when the methane reformation project was cancelled, she had told Madeleine. Her father had used his contacts to find her a position at the University, mainly tutoring undergraduates but with the chance of research into food preservative technology.

Joe had said he would be happy to go to Wilmington with the professor or even without her. Before she left to come home, Maxwell Murdoch had confirmed to Madeleine that any or all of her protégés could relocate to Wilmington if they wanted to, even if she herself declined. Joe also told the professor that he wouldn't mind joining her on the ICI polymerisation research if that option was available.

Luke's decision depended on Gillian, his girlfriend. If she would go with him to Wilmington then that's what he would do. If she couldn't be persuaded then he would have to look for something new. He didn't want to pressurise Gill, he had told Madeleine, in case she later blamed him if it didn't work out for them. Gill had told Luke she would decide before year's end. Luke had told the professor the chances of her agreeing to Wilmington were about fifty-fifty in his view.

"India Charlie, downwind," heard Madeleine in her headphones as Parminder transmitted their position in the Wycombe circuit.

"India Charlie, call finals," came the reply. *"One ahead on base."*

Instinctively all six eyes looked ahead to confirm separation from the preceding traffic, a Cessna 150 banking right to line up with the runway.

Another benefit of Wilmington, Madeleine knew, would be cheaper flying. Dizzy was delighted when the chemistry professor had informed her she was going to renew her Private Pilot's Licence. Madeleine decided to split her training between the Cherokee for general handling and navigation exercises and the Chipmunk—more expensive—for aerobatics, although proficiency in these manoeuvres was not a mandatory requirement for the licence. Research had shown that hourly costs in the States were only half of the British rates. She could get an American PPL and then she and Gordon McKenzie could go off on romantic trips together . . .

"India Charlie, finals," transmitted Parminder.

"India Charlie, cleared to land, wind calm."

The six eyes now looked ahead, the three brains assessing approach path for descent gradient and centreline tracking. Parminder pulled the lever between the front seats fully up to lower the flaps to the landing position. Three posteriors felt the slight retardation and momentary lift increase. Parminder's right hand briefly let go of the throttle and reached up to wind the trim handle in the roof a turn or two to compensate for the change in pitch trim.

In contrast to the sometimes clumsy handling of control wheel and throttle by some of Dizzy's inexperienced students, her old ATA friend guided the Cherokee towards the runway as if it was on rails, with only tiny adjustments of engine power and flight control inputs needed.

They floated over the newly constructed section of the M40 motorway just short of the runway threshold and Parminder smoothly closed the throttle and lifted the nose, holding the little aircraft a few inches off the surface until it was ready for mainwheel touchdown with a squeak of tyres on tarmac. Then the nosewheel dropped onto the runway and the Cherokee was a creature of the ground again.

"Beautiful," said Dizzy as Parminder applied the wheel brakes and ruddered the aircraft off the runway.

"Agreed," offered Madeleine from the back seat.

"Sloppy speed control on finals," muttered Parminder.

"You mean the horrendous two knot drop before you corrected?" queried Dizzy, tongue in cheek. "Yes, that was so pathetic. I thought I was going to have to take control!"

"I was getting airsick in the back," added Madeleine, matching the instructor's tone. "The plane was all over the place!"

The banter continued as Parminder taxied the Cherokee to its parking stand. But then Dizzy pointed out of the window towards the hangars.

"Hello," she said, puzzled. "What's going on over there?"

CHAPTER 16

"It's a Spitfire," said Madeleine.

"It's the one Chris Coleman is bringing here," said Dizzy. "But I thought that was scheduled for next week."

"Chris Coleman?" queried Madeleine. "The chap we knew in the war?"

"Yes, he found it derelict somewhere. He's just had it rebuilt and now it's flying again."

On the apron there was quite a crowd milling around the fighter. Dizzy told Parminder to park the Cherokee on a remote stand to avoid the potential hazard of an inattentive person walking into their propeller.

The three ATA friends shut down their aircraft and strolled over to the crowd to see what was happening. Despite the intervening years Madeleine easily recognised their wartime colleague. His curly hair was thinner and his figure rounder but the impish face had not changed. Chris was standing by the engine

cowling, one hand resting on the leading edge of the Spitfire's slender wing. Pointing at him were several cameras, including a bulky movie camera bearing the logo "BBC Television News". Judging from the notes they were jotting in their notebooks, several of those in attendance were reporters.

Madeleine and her friends edged closer and were able to pick up the gist of the interview.

" . . . a few miles west of Nevers."

"On a farm, did you say?"

"That's right. The chap flying it force landed after the engine got hit by a Jerry 190. The farmer and his friends pushed the aircraft into a barn and covered it with a tarpaulin and hid it behind other farm machinery because they didn't want the Jerries to find it."

"What happened to the pilot?"

"The Resistance tried to get him out of the country but he got captured and sent to a POW camp. Sadly he died before the camp was liberated."

"Was he someone you knew?"

"I knew him slightly. His squadron was based at Biggin."

"So did the farmer tell the British their Spitfire was still in the barn?"

Chris screwed up his eyes. "It seems he didn't bother. Don't forget, when the war ended there were aircraft wrecks all over the place and a damaged Spitfire in a barn probably didn't seem worth bothering about. So it sat there gathering dust for twenty years."

"So how did it get discovered again?"

"Chap on holiday with his wife, touring the area. A local mentioned the Spit and they found it in the barn. The tourist offered to buy it from the farm owners and arranged to have it brought back."

"How did they transport it?"

"It was derigged and packed in crates over there and brought back by road. They took the crates to Duxford. When I heard about it I bought the aircraft from the new owner and set about restoring it."

"How long did it take?"

"Just over three years. It was in pretty good shape, apart from the engine. That took a lot of sorting out."

"So it's still got its original engine?"

Chris gently patted the Merlin's cowling. "About seventy to eighty percent, I should say. We had to cannibalise another couple of defunct engines to get this one going again."

"How much did the restoration cost?"

The pilot grinned. "A lot."

"How much is the plane worth now?"

"A lot more."

The questioning continued and Chris fielded all enquiries with courtesy, even those edging into trivia and his personal life. Answering one reporter, his glance caught Prudence standing at the edge of the crowd. His smile broadened.

"Dizzy! Nice to see you. They told me you were flying today."

Then Chris saw Prudence's two companions and his jaw dropped.

"Good God! Pam Collins! Maddie Maunsell! What the hell are you doing here?"

"Same as you," smiled Parminder. "Except our plane's smaller."

"We took a Cherokee to Compton Abbas," added Madeleine.

"Cherokee?" grinned Chris. "Surely you're not flying them? They've got control wheels instead of sticks and their tailwheels are at the wrong end of the fuselage! Sacrilege!" Noting the puzzled looks on the faces of the assembled reporters and onlookers, he swept his hand towards the ATA pilots.

"Ladies and Gentlemen," he announced, "let me introduce you to the Three Witches of White Waltham."

Dizzy opened her mouth to protest but Chris beat her to it.

"When I say 'witches', I mean three of the best pilots. Aeroplanes—not broomsticks—were their chosen means of transport."

The entourage now turned their attention to Dizzy and her friends and a new round of questioning began.

"What planes did you fly?"

"Did you ever crash?"

"What did the male pilots think?"

"Were your boyfriends pilots?"

"Did you ever get lost when you were flying?"

Chris Coleman sensed that his ex-colleagues were tiring of their interrogation as it descended into the banal and clichéd and announced that the press conference was over. The four pilots posed with forced smiles for the cameras and then Chris physically shepherded the ladies away, thanking the

representatives of the fourth estate for their interest as they moved aside to let the objects of their attention pass through.

Out of earshot of the reporters Chris lowered his voice. "They're a pest but it's good publicity for the Spit. It'll bring punters in when we display it at airshows. Listen, are you three free for a coffee and a chat? I've got to put the bird away and there are a few other things to attend to but . . ."

"Me too," said Dizzy. "A bit of paperwork for today's trip but then I'm free."

Madeleine looked at her watch. "No rush for me."

"I'm okay till five," said Parminder. "Then back for GDDs."

"What's that?" asked Chris.

"General Domestic Duties," laughed Parminder.

Twenty minutes later the four were ensconced in the Nissan hut serving as the airfield's eatery. Under Chris's supervision his Spitfire had been pushed into a hangar by mechanics, sharing the space with the Cherokees of the Wycombe Flying Club.

The building in which the four ATA pilots were now seated styled itself the Wycombe Air Park Restaurant but to those who regularly refreshed themselves there the preferred epithet was "canteen". It was already dark outside and there were only two other customers sharing cakes and a pot of tea at another table.

For his companions, Chris summarised his life since the end of the war. He'd managed to find gainful employment in aviation for a while, he told them, including a spell on the Berlin Airlift.

"What equipment?" asked Dizzy.

"The dear old York," smiled Chris. "Ugly brute, but it could shift ten tons of stuff. Flew nicely, though, like the Lanc."

"Same airframe, wasn't it?" queried Madeleine.

"Pretty much. Lanc's wings and tail. Merlins too, of course."

"So you were a civvy pilot on the Airlift?"

"Yeah. Quite a few civvy airlines got in on the act. The military needed all the spare capacity they could get. That's how Freddie Laker got started."

"I remember him at ATA," said Parminder. "Bit of a wheeler dealer, I seem to recall."

"Got his own airline now, hasn't he?" asked Dizzy. "I'm sure I read about it in 'Flight' magazine. Ex-BOAC Britannias, as I recall."

Chris nodded. "Started last year."

"My brother used to fly those," said Madeleine.

"Nigel Nixon," said Chris. "I liked him. What's he up to now?"

"Captain on 707s."

"Nice."

"What did you do after the Airlift, Chris?" asked Dizzy.

"The company I flew for went bust and there were no other jobs going so I went into journalism." Chris jerked his thumb towards the door. "So I'm one of them, really. Though my stuff is more serious . . . well, that's what I hope."

"How did you get started?" asked Parminder.

"Actually, it was the Airlift. I was asked to write a column about it for one of the dailies. They liked it, so they said. So when Freightways went tits up I went

back to the paper and asked if I could work for them as their aviation correspondent and they took me on."

"So is that what you do now?"

"Mainly. Plus freelance stuff for aviation and motoring magazines. More people are interested in cars than planes so the ratio is gradually increasing in favour of cars."

"What's the pay like?" asked Dizzy.

"Not bad. Enough to look after a wife and two kids and a dog."

"And buy a Spitfire!"

Chris laughed. "Sadly, no. But my dear old Mum fell off the perch a few years ago. She was a widow and she left us a fair pile of cash, so . . ."

"How much flying do you do?" asked Madeleine.

"Got a Chipmunk at Elstree," came the reply. "Probably do a hundred hours or so a year in that."

"Maddie's been flying the Chippie here," said Dizzy. "I finally managed to persuade her to renew her PPL."

"Great," said Chris. "Come and fly our aircraft any time you want." He turned to the Indian. "What about you, Pam?"

"I've been working on her," said Dizzy before Parminder could reply.

"I'm thinking about it," said Parminder. "You lot seem to be having a lot of fun."

A call came from the woman serving behind the counter. "Closing in ten minutes, folks."

The door opened and a middle aged man walked in, looked around and smiled when he spotted the pilots sitting at the table. It was the Chief Flying Instructor of the Wycombe Flying Club.

"You'll have to be quick, Mitch, I'm closing in a few mins."

"It's okay, Elsie, I'm not after a cup of your excellent tea. It's Dizzy I want to see. Actually, it's Madeleine."

Bob Mitchell came over to the ATA group.

"Hello, boys and girls."

"So I haven't filled in the tech log incorrectly then?" smiled Dizzy.

"Not that I'm aware of, Diz. No . . . there's a phone call for Madeleine. You can take it in my office if you want."

Back at the flying club the chemistry professor picked up the receiver in Mr Mitchell's office.

"Hello?"

"Mrs Maunsell?"

"Miss Maunsell here."

"Okay. This is Laura Wissett. I'm a friend of Jackie Holmbeck, Nigel's partner. I'm very sorry to disturb you but I'm afraid there's some bad news."

"Go on."

"Jackie's been in a car accident."

"Oh, no." Madeleine slowly lowered herself into the Chief Flying Instructor's chair. "Is it bad?"

"She's dead, I'm afraid. I'm so sorry."

"Oh, my God."

"She was crossing the road and got hit by a car. They took her to hospital but she was already dead."

Although reeling from shock, Madeleine's brain started to assess the situation. "Does Nigel know?"

"No, he's away on a trip according to Emma, that's Jackie's daughter. We couldn't find the airline number but we found your number in the address book and

your lodger said you'd be at the flying club so that's why I phoned. Are you able to contact Nigel?"

"I can probably find out where he is from the BOAC Operations staff. I think I've got their number at home. Is Emma okay? Does she know when Nigel's coming back?"

"She thinks Monday . . . she's not sure. She's in shock."

"What about Emma's Dad? Does he know?"

"Yes, he's going to try to get down tomorrow. He lives in Barnsley."

"Right. What's going to happen to Emma tonight? Is there anything I can do to help?"

"I'm going to stay here at Jackie's with my daughter, who's a friend of Emma's. We'll be looking after her. Beyond that we haven't made plans yet. Perhaps Emma can stay with us in our house for a while."

Madeleine thought quickly, her mind clearer now. "Thank you for what you've done. I'll try to find out where Nigel is and whether he wants to come back tomorrow if it's possible."

"That would be very helpful. Thanks for that."

"Okay. And if Emma wants to stay at home I'll come down to Epsom myself and stay with her as long as she wants me too."

"Thank you. Sorry to have to pass on such bad news."

"You say you were a friend?"

"Our daughters are in the same class at school. That's how I got to know her. A lovely person."

"That's what Nigel was always saying."

CHAPTER 17

Among the dreaming spires of Oxford were more nondescript buildings, one of which was the town house headquarters of Emcro Film and Television Productions. As with many similar enterprises, Emcro's output varied from mundane documentaries to full-blooded dramas. A dispassionate observer would likewise rate their efforts as variable in quality. Occasionally a turkey would defeat quality control and arouse the opprobrium of the critics. On the other hand, the previous year's production of "Beale Street", a documentary exploring the history of Memphis Blues, had won several prestigious awards.

In a ground floor office, whose door bore the legend "Bertrand Stewart, Senior Production Manager", sat three people. Mr Stewart himself was at his desk, facing Junior Accountant Lionel Willkay and Assistant Producer Antionette Clark.

"The question is," said Mr Stewart, leaning back in his chair and tapping his chin with his biro, "why doesn't anyone else think it's important?"

"But Professor Maunsell and Maxwell Murdoch are big names," said Toni. "Their opinions should count for something."

"Well, the prof sounds like she knows what she's talking about but I'm not so sure about the Yank. Religious nutcase, judging by what you've told me."

"He's a very successful businessman," said Toni, "and he's got a research facility stuffed with eminent science academics. That's what Prof Maunsell told me, anyway."

"Okay, but what about the vested interest angle?" said Mr Stewart. "If these science bods are on his payroll they're not going to rock the boat by challenging what he wants, even if what he wants is no use to anyone."

Toni shrugged, unable to think of an answer.

"She's a friend of yours, isn't she?" continued the senior manager.

"She's my landlady."

"You're sure she's not trying to use us just to get cheap publicity for her pet project?"

"Absolutely not, Mr Stewart. It was my idea. She's very enthusiastic when she talks about it and I thought it would be good material for a documentary."

"Just remind me what she's doing with this carbon . . . whatever it is."

The assistant producer scratched her head. "Carbon dioxide. You get it when you burn oil or coal. They want to find a way of reducing the quantity

emitted by power stations and such like by making it react with methane."

"Because it's poisonous, is that it?"

Toni shook her head. "No, it warms up the atmosphere."

"Is that so bad?"

Again Toni shrugged. "Prof Maunsell says it could be in the future. It could mess up the world's climate."

"How far in the future?"

"She says it depends how quickly it builds up."

"So . . . are we talking years, decades, centuries? . . ."

"I don't think it's imminent, from what I can gather. I don't understand the physics of it myself."

"And the people funding the project are shutting off the taps."

"Yes."

"But the mad American wants to do this stuff over there?"

"Yes."

"And he's a member of this weird political group, right?"

"Yes, the Righteous Warriors of America."

"What do we know about them?"

"They say they're doing God's will by fighting Communism. They think they've been specially chosen."

"Maybe that's not so extreme, Toni. None of us are fans of the Reds."

"True enough, but they include ridding the world of Socialism in their remit. Any form of State handouts is anathema to them. Survival of the fittest and all that."

Their agenda is based on excerpts from the Bible. They're keen on capital punishment, upholding the ban on abortion, chemical castration for homosexuals, that sort of thing."

"Lots of people would have no objections to these policies."

"They think all religions apart from Christianity should be suppressed. Some people say they're anti-Semitic and racist. They openly say that negroes are inferior to whites."

"Not so good."

"Although Prof Maunsell says Maxwell Murdoch seems to be an affable character who probably wouldn't support the extremists."

Mr Stewart nodded. After a few moments' thought he turned to the accountant.

"What did I say about funding for Toni's idea, Lionel?"

The accountant leafed through some papers. "You put it on the 'strong maybe' list."

"Hmm." The manager pointed his pen at the assistant producer. "You said you wanted to do it as a two-parter, Toni. Is that correct?"

"Yes, with Mr Murdoch as the link. The first part would be the carbon dioxide story and part two the Righteous Warriors."

The pair explored the project in more detail for a few more minutes, all three occasionally jotting down notes. Toni confirmed that Bill Bray, one of Emcro's experienced producers, would consider taking charge if approval was forthcoming. At Mr Stewart's request she also gave him a rundown on Madeleine

Maunsell's past and present life, which seemed to perk up the manager's interest. He sent Lionel off to rustle up coffee and biscuits then turned to Toni again.

"I think we can run with this," he said. "But I'm thinking of a different angle."

"What do you mean?"

"Running it more as a human interest story . . . we've got two colourful characters . . . the wealthy religious entrepreneur and the brainy lady who used to fly Spitfires, and they're both keen on this carbon . . . what did you call it again?"

"Carbon dioxide, sir."

"Yeah. Trouble is, that in itself is not very exciting, is it? You've told me you can't see it or smell it or taste it. That's why I'm saying go more for the human interest side."

"That would work, I think."

"I don't think there's enough material for a two-parter, Toni. Maybe we can save a bob or two running it as a single show."

"Okay."

"So we start off with some background, then we say what these two are up to now. Finish off with the carbon whatsit. Tell the viewers we don't know if it's dangerous—keep them worried. It'll make more of an impression if we do that."

"Okay."

"No hope of a romantic angle, is there?"

"Don't think so, Mr Stewart. Maxwell Murdoch seems to be happily married to his third wife and

Madeleine . . . she hasn't got anyone special as far as I know."

"She's not a lesbian, is she?"

"No."

"Shame."

"Pardon?"

The manager laughed. "No, I didn't mean . . . hell, you know what I meant, Toni. The entrepreneur and the lady prof . . . would've added some spice."

"Madeleine's friendly with a chap from the Science Research Council—they've dated a few times—but I don't think they're romantically involved."

Mr Stewart sighed. "Okay . . . no sex, then. But I think there's enough colour to make it work . . . so someone would need to go to the States to grill this Murdoch character?"

"A team of four could do it . . . interviewer, cameraman and producer and assistant."

"Who did you have in mind?"

"No one in particular for the camera but perhaps Lizzie Bedford to ask the questions. Bill Bray would have the final decision if he takes the job."

"Lizzie . . . she did a good job on 'Flowers', didn't she?"

Emcro's documentary on the San Francisco hippie movement, "Flowers in Your Hair", had recently aired on national television and had gone down well with the viewers.

Lionel reappeared with three coffees on a tray. As he offered round a plate of biscuits the senior manager spoke to him.

"How did the budget go on 'Flowers', Lionel?"

The younger man wrinkled his brow. "As I recall we came in under budget, Mr Stewart."

"That doesn't happen too often!"

"No, sir, perhaps one in every three productions."

Mr Stewart turned to Toni. "You were first assistant on 'Flowers', weren't you?"

"Yes . . . I'd be happy to do it on the new project."

"Have you got a title yet?"

Toni frowned. "Haven't come up with anything snappy so far." She looked down at her notes. "'Righteous Climate Warriors' was one idea. Or 'The Professor and the Mogul'."

"They don't exactly slip off the tongue."

"I'm sure we'll think of something better, sir."

"Something with a bit more . . . zing . . . how about 'Carbon Time Bomb'?"

"Would people say we're scaremongering, though?"

"Good point. Okay . . . let's put that to one side. Are you thinking monochrome or colour?"

"Would the budget stretch to colour?"

"Well, as always, that depends on length. If we stick to one hour max we could probably run to colour. What do you think, Lionel?"

"If we keep the interview team down to four people then four thousand would probably cover it if there were no unforeseen expenditures. Can't be so definite when there's overseas travel involved. Too many variables. It would be film, I take it, not tape."

"Yeah, it'll be a while before we're colour taping," agreed Mr Stewart. "Plus the equipment's far too bulky

to fly it over to the States and it would cost too much to hire it over there."

After another ten minutes or so the basic formula for the new as-yet-unnamed production had been thrashed out and Mr Stewart began to bring the meeting to a close. But as Toni was about to follow the accountant out of the door the senior manager called her back.

"How's it going on 'Lucy and Amy', Toni? Is it looking good?"

"Yes, pretty well. Early days, of course. We swapped it round to 'Amy and Lucy'. The marketing people liked the sound better. The script's just about finalised and we've done the initial casting. Shooting should begin within a week or two." The Emcro production was the drama set in Northumberland during the depression of the 1930s, following the contrasting fortunes of two families in the coalfield.

"You're the first assistant, aren't you?"

"Yes. Donny Mcleod is producing it."

Mr Stewart nodded. "Just had a thought, Toni. The Righteous Warriors . . . didn't we make a reference to them in the hippie thing?"

"Just in passing, sir. We didn't know anything about them until after we got back from filming. Maddie told me about them."

"Maddie?"

"Professor Maunsell. Madeleine."

"Of course . . . another thought. Have you worked out which questions you're going to hit Murdoch with?"

"Provisionally, yes."

"I'd like to see them before we launch."

"Of course, sir."

"Great." The senior manager moved to open the door for Toni but then stopped.

"How about you run the new effort . . . the Righteous Nutcases."

"As producer, you mean?"

"Uh-huh."

"Love to. Would Bill object? He's provisionally been pencilled in."

"I'll square it with Bill. He's got a few other things to keep him occupied. He won't mind . . . he thinks highly of you."

"Thank you."

"We'll take you off the coalfield thing so you're not overloaded. Plus, we'll pay you an extra emolument, of course. Think you can handle it?"

"Definitely."

"It's yours then."

CHAPTER 18

Madeleine and Toni had split the newspaper between them. Emma was reading a magazine for teenagers. All three sat at the breakfast table, the two adults in the toast phase and the child still munching cereal. The landlady was already dressed for work but the others were still in their dressing gowns. From a portable radio on the shelf came the sombre tones of a BBC news reader but no one was really paying attention.

Emma turned a page or two then glanced up at the shelf. "Can I put Radio 1 on, please, Madeleine?"

"I don't mind, if Toni doesn't," smiled the chemistry professor.

"Yeah, we don't want to be L seven, girls. Spin that dial, Emms!"

Madeleine swallowed the mouthful of toast and marmalade she was chewing. "And pray tell . . . what is L seven."

"Shall I tell her?" said the TV producer, looking at Emma, "or you?"

The girl smiled, unable to reply with her mouth full of cornflakes. She gave a "you do it" gesture and stood up to change the station on the radio.

Toni held up her two hands, each with thumb and forefinger splayed at right angles, one wrist rotated one hundred and eighty degrees so that the left thumb touched the tip of the right forefinger and vice versa.

Madeleine frowned, still none the wiser. "No . . . not with you."

"Look, this hand makes an 'L', this one a 'seven'."

"Yes . . ."

Toni laughed. "You're supposed to be the brainy one, Madds!"

"What shape is she making?" prompted Emma.

"A rectangle?"

The other two grinned and Toni rolled her eyes.

"Suppose a rectangle has all sides equal . . ."

continued Emma.

"A square?" offered Madeleine, still confused. Then the penny dropped. "Oh, I see . . . let's not be square."

"She's got it! Hooray!" said Toni.

"Actually, we don't say 'square' any more," said Emma. "It's sort of an old-fashioned way of saying 'old-fashioned'."

"So only squares say 'square' now," deduced Madeleine.

"That's right. It would be uncool."

"So something that's up to date is cool, is that it?"

"Yes . . . or groovy . . . or happening."

"I'll make a note. My post grads will be most impressed when I drop 'groovy' into the conversation."

"That's a nice tune they're playing now," said Toni. "Who is it?"

"The Moody Blues," answered Emma. "Nights in White Satin."

"I like it."

"Are you doing homework today?" asked Madeleine.

The girl shook her head. "No, I've done most of the half term stuff. I'm catching the bus into Oxford to meet some friends."

"I can give you a lift if you're ready at half eight."

"Thanks, Maddie, but I'm not meeting them till eleven so the bus will be okay."

"People from the church?"

"Yes, from the Youth Club."

Madeleine switched the questioning. "What time are you going in to work, Toni?"

"Probably for lunch. I've got stuff I can do here this morning."

After the upheaval of her mother's untimely death, Emma Holmbeck had settled into a routine of sorts. When Nigel was home Jackie's daughter stayed with him in Epsom. When he was away on trips Madeleine took herself down to her brother's house to take his place. As a variation, sometimes after school had finished on Friday Emma caught the train to Oxford to spend the weekend with Madeleine, returning on Monday. The headmistress at her school gave her permission to report late as long as she caught up

with the missed work. Recently—an encouraging sign of the healing process—the girl had said she was ready to spend nights alone in Epsom, with a list of friends she could call on in case of difficulties.

With Nigel flying during the February half term week Emma had agreed to come to Woodstock to stay. Madeleine was pleased that the girl had already made friends at the Sunday Youth Club run by All Souls' Church. All in all Emma seemed to be coping with her bereavement, as was Nigel, although BOAC had readily granted him compassionate leave immediately after his partner's death, agreeing that he should not be at the controls of a 707 until his frame of mind was restored.

Likewise, the University had been accommodating to Madeleine when she needed to take time off to look after Emma in Epsom, and the Remunerations Board had confirmed that there would be no deductions from her pay. Taking advantage of his natural leadership qualities, the professor had appointed Luke Stirling as her Methane Reformation Project deputy in her absence, after impressing upon him the responsibilities that went with the post, including punctuality and tactfulness when dealing with people who might challenge his new authority, such as Safety Officer Bill Syerman. Luke had assured her that his new car was completely reliable and his respect for Mr Syerman would never be in question.

All in all, Madeleine's life had entered calmer waters since the New Year after the calamity of Jackie Holmbeck's death and the uncertainty of the future of the MR project. After much heart searching

she had decided to decline Maxwell Murdoch's offer to join Southern National Generation's research facility in Wilmington, the need to offer support to her brother and Emma in their bereavement finally tipping the balance. She renewed her offer to place the Oxford Organic Chemistry Gas lab at Mr Murdoch's disposal if they could agree an agenda and a mutually acceptable finance package.

Eventually a deal was struck between Southern National and the Science Research Council in which SN would pay the MR running costs in areas where the project coincided with the generating company's requirements and Madeleine's consultant fee would feed into the SRC's coffers, which in turn would resume funding the four post grad students in her MR team and meeting costs not covered by SN. There was a small hiccup when ownership of patents and percentages of potential royalties came into the equation but finally an acceptable contract was signed by all parties.

By coincidence, Toni's first Emcro task for 1968 was supervising the interview with Maxwell Murdoch as part of the programme she was producing which delved into the activities of the Righteous Warriors of America. After returning from Wilmington with her team she concurred with Madeleine that if you overlooked the religious zealotry the CEO was an impressive character, if somewhat eccentric. She also let it slip that she had found her way into Gordon McKenzie's bed and he had indeed "shagged her rotten". Madeleine's secret thought was that perhaps it was just as well that she herself would not now have

to face the dilemma of whether she should make herself similarly available.

The Righteous Warriors programme was currently in the editing phase and Toni as producer had the final say when editorial decisions were necessary. The transcript of the latest cut now lay on the breakfast table and Madeleine's lodger's stated intention was to work on it after she was washed and dressed. As the professor picked up her car keys to set off for work, Toni thanked her yet again for originally bringing the Righteous Warriors to her attention and reminded her she would need to check her own inputs before the final cut went to air.

EMCRO PRODUCTIONS

"THE PROFESSOR AND THE RIGHTEOUS WARRIOR"
(provisional title)

Version 5C

Producer: Antoinette Clark (AC)
Editor: Callum Lloyd (CL)
Interviewer: Elizabeth Bedford (EB)
Camera: Hugh Crosland (HC)
Assistant: Michael Watson (MW)

Contributor: Maxwell Murdoch (MM)
Contributor: Madeleine Maunsell (PROF)

EXT. AERIAL SHOT OF COOLING TOWERS, FERRYBRIDGE
POWER STATION.

INTRODUCTION.

EB (voice over): Every year, power stations all over the world burn millions of tons of coal. The heat of combustion turns water to steam, which drives the turbines which generate the electricity which lights and heats our houses and cooks our food and powers our factories. The gases released into the atmosphere by the power stations when the coal is burnt are water vapour and carbon dioxide. Both are harmless substances. But some people are concerned that increasing levels of carbon dioxide may bring problems in the future. We spoke to Professor Madeleine Maunsell of Oxford University.

INT. PROF MAUNSELL'S OFFICE, OXFORD. EB INTERVIEWING PROF MAUNSELL.

EB: Can you tell us, Professor, what your concerns are?

PROF: When the sun's radiation hits the earth's surface, some of it is reflected back into space. This stops the earth from overheating. But if the reflected radiation hits molecules of carbon dioxide it is absorbed, making them vibrate. That energy is transferred to the surrounding atmospheric molecules, making them warmer. Each year more carbon dioxide is injected into the atmosphere by mankind's activities so the atmosphere will become progressively warmer.

EB: Is that harmful?

PROF: At the moment, no. There are roughly 320 parts per million of CO₂ in the atmosphere--

EB: What does that mean?

PROF: In every million molecules, roughly 320 are molecules of CO₂.

EB: That doesn't sound like much.

PROF: No, it doesn't, but if the number increases it could have detrimental results.

EB: Such as . . .

PROF: It could affect the climate--it could cause droughts and flooding and increase the occurrence of extreme weather events, like hurricanes. Heat waves could start forest fires.

EB: How much would the CO₂ have to increase before the climate was affected like that?

PROF: Experts say that 400 parts per million would be the danger point.

EB: When will the CO₂ levels get to that figure, Professor?

PROF: At our current rate of production, eighty to one hundred years.

EB: No need to panic, then!

PROF: No, not yet!

EB: What should we do about it? Can we ignore it?

PROF: It's a controversial subject. Conventional wisdom is that alternative sources of energy will be developed before we get to the critical stage.

EB: What are the alternatives?

PROF: Hydro-electric, solar, wind, tidal--they're all renewable sources of power and they don't generate CO₂. Nuclear power is non-renewable and has the problem of disposal of radioactive waste but it doesn't generate CO₂, which is obviously helpful.

EB: We're already using some of these alternatives, aren't we? Like nuclear and hydro-electric?

PROF: Yes, but we need to introduce more renewables so the CO₂ level can be stabilised. Then future generations won't have to worry about climate change.

EB: And your team's working on a method for doing that?

PROF: What we're doing is working out ways of removing some of the CO₂ so it doesn't build up before the renewables come in. The remainder will be absorbed by the Earth's forests.

EB: How are you doing it?

PROF: We mix the CO₂ with methane and heat the mixture to make hydrogen and carbon monoxide.

EB: So do these gases get released into the atmosphere instead of the CO₂?

PROF: No, they're used in other applications . . . to make other chemical products or to use as fuel.

EB: Are there any disadvantages?

PROF: Yes . . . if you burn fossil fuels for the heating process then you're generating CO₂, which defeats the object of the exercise.

EB: So what's the answer?

PROF: Using alternative energy sources to heat the gas mixture.

EB: You're working with an American company looking at using nuclear power for the heating process. Is that correct?

PROF: Yes.

EB: But didn't you just say that nuclear has its own drawbacks?

PROF: Yes, the same as nuclear power stations. Disposal of radioactive waste products and preventing radiation leaks.

EB: Do you think the nuclear option will work?

PROF: In theory, yes. We're doing research to confirm viability.

EXT. SOUTHERN NATIONAL HEADQUARTERS, WILMINGTON, NORTH CAROLINA, USA.

EB (voice over): Our team went to Wilmington, North Carolina to interview Maxwell Murdoch, Chief Operating Officer of the Southern National Generation Company.

INT. MAXWELL MURDOCH'S OFFICE. EB INTERVIEWING MAXWELL MURDOCH.

EB: Thank you for agreeing to talk to us, Mr Murdoch.

MM: It's my pleasure, ma'am. My friends call me Max.

EB: Can we confirm that Southern National is working on the same area of research as Professor Maunsell's team?

MM: That's correct.

EB: So you're also convinced about the need to stop CO2 building up in the atmosphere?

MM: Yes . . . we're pumping out billions of tons of this stuff into the air each year and we have to reduce that.

EB: Many experts say the danger level won't be reached for another eighty to a hundred years and by then we'll have different energy sources. So why go to all this trouble now? What about the cost and effort involved?

MM: It's the will of God that we look after the planet he gave us. We have to do God's bidding.

EB: Is this a doctrine of the Christian Church?

MM: Okay, the Bible doesn't mention carbon dioxide directly . . . that's true. But God created the world for our benefit so we can infer a responsibility for looking after it, which means preserving the atmosphere as it is and not polluting it. The same goes for the oceans and the continents.

EB: But most of mankind's industrial activities cause pollution of some sort, don't they?

MM: We gotta get the balance right, Lizzie. The business of America is business, to quote President Coolidge. We all agree on that. But while we're doing it we gotta keep the planet as clean as we can.

EB: Southern National is one of America's biggest generating companies, isn't it?

MM: I'm proud to say that is so.

EB: So you produce a lot of CO₂?

MM: Yes . . . we're aware of that and that's why we want to cut it down by using this Reformation process that we're pioneering.

EB: Professor Maunsell agrees with you that nuclear power for heating the Reformation gases is a viable option, is that right?

MM: Yes, her team was looking at ways of reacting the methane and the CO₂ together but they couldn't come up with a source of heat that didn't produce CO₂ itself. So that's where we came in with the nuclear option.

EB: You're a member of the Righteous Warriors of America, aren't you, Max?

MM: Yes.

EB: Are they involved in this process?

MM: They agree with my team that we have to protect our planet.

EB (to camera): Later on we'll be talking to Mr Murdoch about the Righteous Warriors but in the meantime here's a presentation on the chemistry and physics of--

"Do you want a cup of tea, Toni?"

The producer looked up from her work to see Emma holding the kettle.

"Lovely."

The girl pointed to the sheaf of papers under Toni's hand. "Is that the programme with Madeleine in?"

"Yup. She'll be a TV star soon."

"Groovy."

Toni flicked through a few more pages of the transcript and came to the second interview session with Maxwell Murdoch.

EB: Some people are concerned that some members of the Righteous Warriors hold extremist views. What would you say to them?

MM: If you're talking about extremists, think of the Moaists in China. Look at the atheist regimes of

Stalin and Hitler. If the forces of good had been more determined in fighting the forces of evil maybe those bad guys would never have gotten as far as they did. We have to be stronger than the enemy or they will defeat us.

EB: It's been reported that your colleague Ronald Bateman has called for tactical nuclear weapons to be used against the North Vietnamese forces. Would you support this policy?

Toni picked up her red biro and added an annotation in the margin. *Is "reported" sufficiently strong to guarantee we're safe from libel accusation if R.B. denies he said this? Recheck by Legal?* She took a sip of tea and resumed her task.

MM: No, I wouldn't, unless under extreme provocation.

EB: Such as . . .

MM: If the Reds started sending down mass reinforcements from China.

EB: That would be grounds for the US bringing in nuclear weapons?

MM: We would warn them first. If you don't stop what you're doing, we'll nuke you.

EB: On another topic . . . some members of the Warriors have been accused of racist statements. What's your view of that?

MM: It's a controversial area. What cannot be denied is that some types of humans are more advanced than some other types.

EB: Can you give me an example?

MM: Okay, take technology. The white races worked out the laws of science. They invented the steam engine and the gasoline engine and the airplane. They invented factories. They invented rockets that can take men into space. Or take politics . . . how many non-white races have democratically elected governments?

EB: So are non-white races intellectually inferior?

MM: I think they just haven't evolved as quick as the rest of us--not yet anyway. And there are plenty of exceptions, such as Martin Luther King--a very gifted man.

EB: Some people regard these views as offensive. What would you say to them?

MM: It's a case of stating what we know to be true. Some facts are unpalatable but that doesn't stop them being true.

EB: The teaching of the Christian Church is that all men are created equal. Are you saying you don't agree with that, Max?

MM: They have equal rights. That's doesn't mean they're equal in ability because we know that's certainly not true. There are plenty of black folk who are cleverer than some white folk.

EB: Are women equal to men, would you say?

MM: Again, that's a facile question, Lizzie. There are so many--

The phone rang in the hall. Toni got to it before Emma, who was halfway down the stairs.

"Hi, Toni, it's Bertie Stewart."

"Good morning to you. How are you?"

"I'm fine. Listen Toni, we've got a bit of a problem."

"Uh-huh."

"Actually it's worse than that. We're in a pickle and Donny suggested I give you a call."

"Go on."

"It's 'Amy and Lucy' . . . you were going to be AP on that weren't you?"

"Yes. You took me off it so I could produce the Warriors."

"Right. Anyway, you probably remember the part of Hermione?"

"The schoolgirl friend of the other girls?"

"That's right. They were supposed to be shooting in Aldbury today but the girl playing Hermione has gone sick and we can't find a replacement."

Although the drama was set in Northumberland, Emcro preferred to shoot it closer to their Oxford headquarters to minimise the cost and complication of transport. For the external shots they had chosen a row of terraced houses in Aldbury, a village near to Berkhamstead in Hertfordshire to stand in for the cottages inhabited by the families of the miners. For the interior scenes, sets had been constructed inside

a warehouse in Berkhamstead hired by the production company.

There was the extra complication of school lessons for the child actors. To meet legal requirements Emcro had to hire peripatetic teachers to tutor the children on set when shooting schedules kept them out of school, which added to the difficulty of sourcing replacements when required. Some parents of young actors would only allow them to perform during school holidays.

"What about continuity, Mr Stewart?" asked Toni now. "If we bring on a sub—"

"Mary's going to be unavailable for a while apparently. She's got to go to hospital—nothing too serious but she won't be able to work for us. There's no problem with continuity 'cos she's only done a couple of scenes—we'll reshoot them. But we can't find anyone to take her place. None of the usual casting agencies can help us so Donny suggested giving you a call to see if you could come up with any ideas."

"Just remind me . . . how old is the character?"

"Just a minute, let me check . . . she's eleven."

"Appearance?"

"Not critical."

"I may be able to help, Mr Stewart. There's a friend of my landlady staying with us at the moment. She's on half term. I could ask her if you like."

"Has she done any acting?"

"School drama, I think."

"If she could do it it would get us out of a big hole, Toni."

"When would you need her?"

"ASAP. The whole crew are at Aldbury. There's some other stuff they can shoot first but we really need her today if you can fix it. Sunset is just after five and they want to shoot in strong daylight."

"I'll call you back in a few minutes."

CHAPTER 19

Xiu Ying Song was glad she had brought gloves and a scarf. A stiff northerly wind overpowered the feeble efforts of the late February sun at raising the temperature and swept discarded rubbish along the platforms of Oxford station. Her train was running late and Xiu Ying decided to take refuge in the grubby waiting room, which would at least shield her from the arctic blast.

There were three others similarly taking shelter, two middle aged ladies and . . . Joe Curtis. The two post grads looked at each other in surprise.

"Susan! What are you doing here?"

"Catching the train to London."

"So am I. You never said you were going to London."

"Nor did you."

Along with Luke Stirling and James Ibsley, Xiu Ying and Joe had attended the morning meeting called by Professor Maunsell in Lab 2C. She said she would tell

them the latest news from Wilmington and how it affected their own work and then they could take the rest of the day off. It was an occasional Friday treat for the post grads to give them a long weekend.

There had not been major changes in 2C since Southern National had taken over funding of the Methane Reformation project. Initially Wilmington wanted the Oxford team to work exclusively on improving catalyst performance and drop their other areas of research but Madeleine fought successfully for permission for the post grads to pursue their other investigations, pointing out that funding for these came from the British Science Research Council rather than from Southern National. The Americans had decided that Wilmington would discontinue periodic flow experiments and concentrate exclusively on steady state processes although they agreed to let Oxford carry on, a relief to Xiu Ying and James, whose PhD thesis hinged on this work.

With a blare of its two-tone hooter the London train announced its imminent arrival and the waiting passengers watched the maroon diesel locomotive approaching the station. But Joe's attention was distracted by a whistle from the opposite direction.

"Well, look at that. The last of the few."

Xiu Ying followed his gaze. On the northbound line a steam locomotive clanked through the station at the head of a mixed goods train, Joe's gaze following it until the London train cut off his vision.

"Is it special?" asked Xiu Ying.

"It's a rarity," came the reply. "The steamers will all be gone by the end of this year."

"Are you a trainspotter, Joe?"

"Used to be, when I was a kid. That's a Stanier Black Five."

"If you say so! It looked very dirty."

"It'll be scrap metal soon . . . sad."

A few minutes later their own train was accelerating southwards and Joe asked his colleague why she was headed for London. It seemed that Xiu Ying's father had arrived from Hong Kong earlier that day. He was part of a delegation formulating the colony's legal system for implementation after the transfer of sovereignty to the Chinese government in 1997.

"But that's thirty years away!" said Joe.

"I think the plan is to finalise the arrangements and bring them in before the handover so it's not a sudden change. It's a bit complicated 'cos they have to take into account the demands of the Chinese."

"Hong Kong isn't it going to be part of China then?" asked Joe.

"That's what the Chinese want, but not the Brits. Daddy says it's going to be a Special Administration or something. The big argument will be about the form of government, how much independence the Chinese will allow."

"Didn't you tell us there were riots there last year?"

"Yes, but things are a bit quieter now, thank God."

"I thought you Buddhists didn't have a God!"

"We don't, Joe! I've picked up English ways of speaking."

"So how long will your Dad be in London? How long are you staying?"

The delegation was expected to last a week, said Xiu Ying. Her father was staying in a hotel in Chelsea and had booked two rooms—one for himself for the duration of the delegates' assembly and another for his daughter for the weekend.

"So a bit posher than your digs, then Suzie!"

Unusually for a post grad student Xiu Ying had never left the accommodation in Headington she had taken up residence in at the start of her undergraduate course. She got on very well with her landlady and the convenience of having her room cleaned for her and her laundry done outweighed the loss of privacy as far as she was concerned.

"Are you still in your flat in Botley?" asked Xiu Ying now.

"Yup."

"I hope it's tidier than it used to be when we last saw it! Everything caked in dust and the kitchen sink full of dirty pots. And the toilet . . . ugh!"

"We're a bit more civilised now, Suzie. We actually clean pots after we've used them rather than just before and we pay a cleaner to come in once a month. The toilet bowl gleams."

"Civilisation is the War against Entropy," laughed Xiu Ying, quoting the embroidered text hanging in a frame on a wall in Professor Maunsell's office. "There was plenty of entropy in your flat, Joe!" In the world of science the term "entropy" meant "disorder". At an early stage in their undergraduate careers it was impressed on chemistry students that the Universe naturally tended to greater disorder and that only

expenditure of effort and energy could reverse the trend.

"Ever since the wall hanging appeared," continued Xiu Ying, "Bill Syerman's always coming out with that quote when he's telling us off for untidiness."

Joe nodded. "He's a bit obsessive, isn't he? I'm sure someone told me that in Bill's house his wife had to make sure that the saucepan handles were never overhanging the edge of the cooker in case they got knocked over."

"I'm glad the Prof was able to keep the team together," said Xiu Ying, changing the subject.

"Me too," concurred Joe. "Although it would have been great to have gone to the States. I'd like to go there one day. Maybe after I've done my PhD."

"What about . . ." started Xiu Ying but then looked down, her question unfinished.

"Maria?" said Joe. "Is that what you were going to ask?"

The girl nodded silently.

Joe smiled. "Haven't seen her for yonks. We're not going out any more."

"Oh."

Joe smiled. "What about you, Suzie?"

Xiu Ying shook her head and looked out of the window.

"Tickets please."

The youngsters looked up to see a middle-aged uniformed inspector in a peaked cap holding a clipper. They handed over their tickets and Joe noticed the script on the signet ring on the inspector's finger.

"GWR. God's Wonderful Railway."

The inspector bowed his head a little and lowered his voice conspiratorially. "You said it, sir. We're not supposed to wear items from the old days but some of us can't help ourselves."

"Are you sorry to see the end of steam?"

"Personally, no," replied the inspector. "Mucky, smelly things. Mixed feelings for the engine men though. They were proud of their mounts—true—but their job's a lot easier and a lot cleaner with the diesels."

"We saw a Black Five at Oxford. It looked a bit tatty."

"Foreign equipment," smiled the railway man. "Belonged to the 'Ell of a Mess before nationalisation."

"The what?"

"LMS—London Midland and Scottish, as it used to be. You would never have found a Stanier loco on our road, even though he started his career with us before he defected. But there's only a few steam locos left now and they wander all over the place."

"I saw 'Mallard' at King's Cross just before it was withdrawn," said Joe, referring to the locomotive that held the world speed record for steam traction. "Filthy, it was. The only clean bit was where the crew had wiped the cab side so they could see the number."

The inspector harrumphed. "We kept our engines clean even when standards were slipping on the other companies, like the Late and Never Early Railway."

Joe laughed, amused at the inspector's interpretation of the acronym for the London and North Eastern Railway, the owners of the A4 locomotive class of which "Mallard" was a member.

"It's funny," Joe said, "when I was a spotter I used to buy the magazines to find out what was going on and it was surprising to see we were still building steam engines when the rest of Europe went for electric and diesel."

"The country was broke after the war, don't forget. We couldn't afford the new technology," explained the inspector. "And we had loads of cheap good quality coal so it made sense to carry on making the steamers. Shame, though, some of them they're scrapping now are only ten years old. They were built to give thirty years of service."

"What a waste," said Joe.

"You said it!" came the response. "Anyway, nice talking to you, sir. Enjoy your journey." The inspector handed back their tickets and moved along the carriage.

"Sorry," smiled Joe, looking at his travelling companion. "That must have been a bit boring for you."

"I didn't mind. I was thinking about what we were talking about."

"Boyfriends and girlfriends, you mean?"

Xiu Ying blushed. "No . . . the Professor."

"What about her?"

"Well, you think she would be happy that all her hard work paid off. She saved the MR project."

"You don't think she's happy?"

The girl frowned. "It's difficult to put into words. When she smiles it's like a sad smile. Sometimes it's like she looks a bit tired."

"Can't say I've noticed, myself," said Joe. "But it must have been hard for her, dealing with Southern National and the SRC, working out a deal that everyone's happy with. Perhaps she's feeling the effects of that."

"Yes," said Xiu Ying, "that could be it. And her brother's partner was killed in a car crash, wasn't she. If her brother's sad then maybe she's sad too."

Joe nodded and thought for a moment. "Tell you what, Suzie . . . how about we organise a surprise party for her. To say thanks and cheer her up a bit?"

"That's a lovely idea, Joe," beamed Xiu Ying. "I'm sure the others would help us to organise it."

"That's settled then."

The girl reached into her pocket and extracted a bar of chocolate.

"Like a bit?"

Joe nodded. "Thanks."

They nibbled at the confectionery for a minute or two and then Joe restarted their chat.

"It could be a bonus that we're working with Southern National," said Joe. "Maybe after I've got my PhD they'd take me on. There's no doubt the States is the place to be in our line of work. Everything's better there . . . more resources, better pay."

"I can see the temptation," said Xiu Ying.

"What about you, Suzie. Do you think you'd be interested?"

The girl wrinkled her nose. "Maybe. But I also feel I should go back to Honkers to be with my family. They've been so supportive of me since I first came to Oxford."

"Incredible, isn't it? Who would have thought when we both started as undergrads back in '63 we'd still be working together five years later. What a great team, eh?"

"Yes, I like being with you . . . in this team."

Their eyes met for a moment and then deflected towards the window to watch the Berkshire countryside flashing past their carriage at ninety miles an hour. For a minute or two an uneasy silence prevailed. Then Xiu Ying looked at her colleague again.

"Why are you going to London?"

"To stay with my folks in St Margarets."

"Where's that?"

"Near Richmond, on the River Thames."

"Is it nice?"

"Yeah . . . wouldn't mind living there myself one day."

"What does your Dad do?"

"He sells insurance. Works in an office between St Margarets and Twickenham. Tomorrow we're going to the Imperial War Museum."

"In London?"

"Yes, it's in Southwark, south of the river, just to the east of Waterloo. They're putting on a special exhibition about the Desert Rats."

"What's the Desert Rats?"

"The British Army Division who fought against Rommel in North Africa during the war. My Dad was a sergeant in the Rats."

"Why were they called 'rats'? That's not very nice."

"The Germans said the British were trapped like rats during the siege of Tobruk. So our chaps thought it would be good counter-propaganda to refer to themselves that way."

"Is that where your Dad fought the Germans?"

"No. My Dad was at the battle of El Alamein in Egypt. He was wounded and got shipped home. They gave him a medal."

"So it'll be nostalgic for him to see things about the Desert Rats?"

"Yes, he's meeting a few of his wartime chums there, too, so it'll be a reunion as well."

"And you're going too?"

"Yes. It'll be interesting, I reckon."

"Why didn't you drive to London, Joe? Wouldn't that have been more convenient?"

"My car's kaput, Sue. Leaking radiator and I can't afford to get it fixed, not at the moment anyway."

"Pity."

"Yeah."

The train cruised through another mile or two of windswept English farmland. This time it was Joe who restarted the conversation.

"Have you got your driving licence yet, Sue?"

"Not yet. Still taking lessons. Got my test booked for next month."

"Will you buy a car?"

The girl grinned. "It'll be one of the suggestions I make to my Dad!"

"You're gonna ask him to buy you a car?"

"Isn't that what Dads are for!"

"So will you be with him all weekend?"

"Not tomorrow. He's meeting some of the others for a preliminary session of some sort."

"What will you do while he's in this meeting?"

The girl shrugged. "Look around the shops, maybe."

Joe looked earnestly at her. "I don't want to spend all afternoon listening to Dad and his mates going on about the war."

"No," said Xiu Ying, blushing a little.

"Do you want to meet somewhere later in the afternoon?"

Xiu Ying returned his gaze. "Is this a date, Joe? As in . . . date?"

"Do you want it to be?"

"Yes, I do."

"Then yes . . . it's a date . . . as in date."

CHAPTER 20

The three men exited the front door of the Majestic Lodge ski hotel and turned left along Broomstick Road. Their exhaled breath condensed into billowing clouds in the sub-freezing temperature, their boots crunching into the fresh snow on the sidewalk. All three immediately donned sunglasses against the bright winter sunshine. The anonymity they afforded was a bonus, of course. With the Aspen ski season in full swing the three had to occasionally weave past people clomping the other way towards the gondola station in their cumbersome ski boots.

After a hundred yards or so the trio turned left again into the driveway of one of the Alpine style chalet bungalows lining the road. One of the men, a heavy set square-jawed individual with cropped grey hair, removed his glove to get a key out of his pocket. The other two followed him indoors. The men had enjoyed a convivial lunch at the Majestic but now they needed privacy for further business.

The owner of the bungalow and the cropped hair was retired General Ralph Hartmann, ex-United States Army. His guests were Louis Maguire, Deputy Finance Director at the Luchini-Franks Investments Group and Maxwell Murdoch, owner and Chief Executive Officer of the Southern National Generation company. All three were senior members of the Righteous Warriors of America.

The trio had arrived separately that morning in their business jets, which would wait at Aspen-Pitkin airport with their crews until the following morning, when they would whisk their owners respectively back to Houston, Texas, New York and Wilmington, North Carolina. The men's fortunes came respectively from manufacture of military hardware, high finance and power station construction. They had chosen Aspen to minimise the chance of recognition by members of the public and General Hartmann's ski chalet would guarantee that their conversations would not be overheard.

The ex-military officer sat his guests down and served each of them and himself a glass of rye on the rocks. Before long clouds of cigar smoke wreathed the men as they made themselves comfortable in the leather armchairs.

"Okay, guys," said the general, "we're not here for the skiing. This is where we get down to the nitty-gritty." He turned to Max. "Louis and I have already done a bit of research and we're kinda headed towards a provisional plan."

The original motivation for Operation FAB was the apparent lack of determination from the government

of President Johnson to eliminate the Communists in North Vietnam once and for all. The acronym stood for "Fire and Brimstone" and the general and his guests all knew the passages in the Bible in which the wrath of God took this apocalyptic form. The reluctance of the President to resort to tactical nuclear weapons in the war-torn country brought much teeth-gnashing from the more resolute Righteous Warriors, who could not understand why this God-given advantage was not being deployed to destroy the atheists.

The general briefed Max succinctly, with Louis occasionally adding a comment. The gist of the briefing was that a group within the Warriors were exploring methods of covertly attacking Hanoi with some sort of nuclear device, independently of any military or political organisation. As he spoke, the general and the finance director watched their associate closely to gauge his reaction. When Ralph finished speaking Louis nodded discreetly at the general, a pre-arranged signal that indicated that further elaboration was in order.

"That's the bare bones of it," said Ralph now. "What do you make of it, Max?"

"Are you saying the Government want no part of this?"

"We haven't even made overtures. As soon as the politicians get hold of something secret the leaks start. Sadly that's also true in the senior echelons of the military. The bleeding heart liberals would have a field day. At the moment there are only six people involved, seven if you want to be part of it."

"Why did you approach me, Ralph?"

"Before I answer, can you confirm you're in our out, Max. If you're with us we'll talk details. If not we stop here and you tell no one else about this conversation. It never happened."

The CEO nodded slowly. "You need to tell me a bit more, Ralph. It sounds okay in principle but where do I fit in?"

"As I just said there are two logistical problems—obtaining a weapon and delivering it. For obvious reasons we can't approach the Pentagon. There are other sources but—apart from the British—they're not on our side. Our investigations indicate it's difficult to corrupt the Brits so that's probably a dead end."

"There's Israel," interrupted Louis, "but we think they wouldn't be interested 'cos they don't officially have nuclear weapons and they couldn't risk being involved in something that would give the game away if it got found out. And Vietnam ain't their problem."

"So," continued Ralph, "if we can't get hold of a weapon it would have to be some other kind of device, like a reactor. Like the sort of reactor you're bringing in to clean up your power stations."

Max frowned. "But how can you use a reactor as a weapon?"

"You're using pressurised water reactors, yes?"

"Uh-huh."

"With graphite moderators?"

"Or water. We're looking at both configurations."

"And water for cooling and heat transfer."

"Uh-huh."

"So what would happen if the pressure vessel was breached?"

"Nasty . . . the water would boil. You'd have to drop the control rods to stop the core overheating."

"Suppose the control rods weren't inserted?"

"Even nastier. The heat would turn more of the water into steam, which would react with the zirconium fuel cladding . . . you'd get a build up of hydrogen."

"And if the hydrogen was ignited by the reactor heat?"

"A big bang."

"So you'd get an explosion of radioactive material?"

The CEO smiled. "Impressive, Ralph. Not exactly a Hiroshima but you'd upset a few people, for sure."

"Would it work?"

"Probably. How would you breach the pressure vessel?"

"Blow out panel activated by a timer."

"Okay . . . where would you deliver it? How do you deliver it?"

The general took a drag on his cigar. "Like I said, we deliver it to downtown Hanoi. The 'how' bit ain't easy. I mentioned four methods, didn't I? Let's elaborate a bit.

"By missile . . . impossible for the bad guys to intercept but getting hold of one powerful enough to lift the reactor would be virtually impossible, as would concealing the launch pad. Plus the guidance systems on these things ain't accurate enough. By airplane . . . no chance . . . our guys would destroy anything on the radar they weren't happy with and the

NLF have got their own radars—if our guys missed it the enemy have got Soviet SAMs to knock out any intruders." Ralph was referring to the National Liberation Front of North Vietnam and surface-to-air missiles. "Never mind the problem of retrieving the pilot if he got through.

"Which leaves land and sea, or river to be more precise. Okay, let's say we stick the reactor on a truck and send it to Hanoi from the south. What are the chances of it making it to the target without interception, even if it's disguised as an NLF vehicle? And the roads ain't exactly six-lane freeways. Farm tracks would be a more accurate description. It would take a long, long time for the truck to get to the target. And again we'd be faced with the retrieval of the delivery team."

"So it would have to be a boat, then," deduced Max.

The general ground out his cigar in an ashtray. "There would be other problems but we reckon they would be easier to solve. The reactor would be carried on a vessel entering North Vietnam via the Red River estuary. It's around 170 miles from the coast to Hanoi along the river so we're talking twenty hours or so. The crew get to Hanoi, moor the boat and then escape on an inflatable dinghy, back the way they came. Our guys pick 'em up in the Gulf of Tonkin."

"What sort of boat?," asked Max.

"Again, we've got three options. Some sort of small naval vessel carrying NLF markings or a civilian supply vessel or a fishing boat, which would be more

anonymous. A naval boat would be difficult to source—it would have to be a type the Commies use. Plus it would be expected to be in radio contact with the NLF, which adds an extra layer of complication, language-wise. Supply vessel—easier to get hold of but likely to be challenged as it headed inland—the NLF are as paranoid as our boys about saboteurs. So . . . we use a fishing boat. It discreetly joins a fleet at night in the Gulf and heads for the river when the others do, lagging behind a little. We're pretty sure Vietnamese fishing vessels don't carry radio so a challenge is unlikely. It'll be picked up on their coastal radar of course but they'll assume it's one of the fishing fleet. In the river it'll drop a little behind the others and drop anchor in Hanoi harbour when it gets there. Our team will set the timer on the blowout panel and quietly launch their inflatable and head downstream. It might still be daytime by then but a tiny boat headed towards the sea is unlikely to raise interest, even if the locals had somehow heard about a big unexplained explosion in Hanoi."

"Long way for fishing boats to go," said Max. "A hundred and seventy miles. Why wouldn't they land their catches on the coast and send them to Hanoi by train?"

"Yeah, they normally offload at Hai Phong but our guys have bombed hell out of the railways so it's not unusual for the fishing boats to take their catches up the Red River."

Max nodded. "Sounds okay . . . I like it."

"Great. You can supply a reactor, then?"

"Yeah, I reckon. A graphite moderator would be best, to make sure the heat keeps coming if it loses all the water."

"I don't know much about this nuclear stuff," said Louis. "What does the moderator actually do?"

"My Wilmington guys explained it to me," answered Max. "The uranium atoms in the fuel pellets shoot off neutrons which hit other uranium atoms which shoot off more neutrons so you get a chain reaction and . . . if you don't control it . . . boom!"

"So the moderator controls the reaction?"

Max laughed. "No . . . the opposite! The neutrons are too fast to hit other uranium nuclei which means you don't get a nuclear reaction. So you've gotta slow 'em down. That's what the moderator does. You can use graphite or water."

"So without the moderator . . . no reaction?"

"Correct. No reaction, no heat. Just a cold, useless lump of uranium fuel shooting off high speed useless neutrons."

"So if the moderator is water and we blow the pressure vessel the water disappears as steam and the reaction stops?"

"That's right. It's a safety feature of water moderated reactors. Lose the water and the reaction stops. That's why I'm suggesting graphite for what you've got in mind. Even if you lost all the water you'd still get a nice big radioactive bang."

Ralph smiled. "That's great, Max. That's just what we wanted to hear."

"A thought," said Max. "What about evidence? It wouldn't be much fun if the NLF could show proof that

the Yankees had made their capital city uninhabitable. The Soviets might decide to retaliate with their nukes. We'd have to make sure there were no serial numbers stamped on components, that sort of thing."

The general shook his head. "Not a problem. The US government genuinely wouldn't know anything, would they? Our guys could suggest that they put out a bulletin saying the Hanoi explosion was obviously the Commies trying to make nuclear weapons to use against the South Vietnamese Army—outrageous, we'd say. Doubly outrageous if they're trying to blame Uncle Sam for the misfortune they brought on themselves."

"Actually, there wouldn't be a helluva lot of evidence to find," said Max. "Tiny bits of highly radioactive debris."

"And we could lay a false trail anyway—stamp some Chinese lettering on the components."

"Who did you plan to recruit for the delivery team?" asked Max. "South Vietnamese guys or American?"

"We've got someone working on that," said Louis. "We've found three Chinese guys who escaped from a jail in Peking and fled to the States. They were political prisoners who got tortured by Mao's thugs so their motivation would be revenge against the Communists—any Communists. Plus a big bundle of greenbacks if they need more persuading."

"If they say yes we'll take them out in a fishing boat a few times so they can learn the ropes," said Ralph. "We'll buy a fishing boat in Hong Kong and modify it to suit our needs. That's where the mission starts if we go ahead."

"So how will the reactor get to Hong Kong?"

"On a freighter as general cargo—billed as engineering components or something like that."

Max nodded. "Probably best not to build it at Wilmington. We don't want prying eyes. Somewhere on the West Coast would be better for subsequent shipping to Hong Kong. Somewhere quiet."

"We were thinking along the same lines," said Loius.

"I'd have to have a cover story for the guys building it," said Max.

"Tell them it's secret work for the CIA."

Louis chuckled. "So secret even the CIA don't know about it."

The three plotters smiled at each other in mutual admiration.

"Gentlemen," said Ralph. "We have a plan."

CHAPTER 21

The ward sister and duty doctor stood on one side of the bed and Nigel Nixon and Madeleine Maunsell on the other. They were all looking at the body of Dorothy Nixon, who had just breathed her last. The half-siblings had been summoned to St John's Hospital in Maidenhead after Nigel's mother's condition had quickly deteriorated after her most recent stroke. For privacy during their grieving a screen had been erected round the bed.

"We'll leave you alone for a while," said the doctor now.

"Thank you," said Nigel. "Would she have been in pain?"

"Doubt it," said the doctor. "She never fully regained consciousness after her first stroke, did she? When was that?"

"Last October," said Madeleine.

"Ah, yes."

"What's the procedure now?" asked Nigel. "Will there be a post mortem?"

"I doubt that's necessary. There was no uncertainty over the cause of death. How old was she?"

"Seventy-nine," said the ward sister and Madeleine simultaneously.

"Sister Williams will come back in ten minutes," said the doctor. "She'll advise you on what happens next."

"Our condolences," said the nurse with a sympathetic smile as she and the doctor left, the screen curtains dropping back into position after their departure.

Nigel bent forward and kissed his mother's forehead. "Bye, Mum."

"She's at peace," said his half-sister. "Her quality of life was pretty grim before the first stroke, wasn't it."

The pilot nodded. "Yes, it's a relief, I suppose. What would things have been like if she'd regained consciousness? I shudder to think."

"A shame she was so unhappy."

Nigel looked at his sister. "It's a dreadful thing to say, Maddie, but trying to look after her was more of a chore than a pleasure. It was only filial duty which kept me going to Fearnville. I must be worst son in the world."

"No, you're not. She made things difficult for you. And for herself."

"And for you, too."

"I wasn't a blood relative so she wasn't so concerned about me."

The pilot turned his eyes towards his mother's face. "As you said, she looks more peaceful now than when she was alive."

For a minute or two they discussed the funeral arrangements that had been previously formulated and Nigel confirmed that he would phone Henry, their father, to notify him of his first wife's death and to invite him to stay with him and attend the funeral.

"I'll have to go through her effects," said Nigel. "My house is full of the stuff we didn't dispose of when we sold her house."

"What sort of things?"

"Clothes, documents, jewellery, knick-knacks."

"I can help with that, if you like."

The pilot smiled. "Thanks, sis. Might take you up on that."

"The clothes could go to a charity shop."

"Yes, and I could sell or auction the jewellery, I suppose."

Nigel briefly picked up his mother's hand and shook his head sadly. "Sorry, Mum. A bit disrespectful, isn't it, talking about getting rid of your chattels when you've only just left us."

There was a pause.

"Will there be anyone else but us and Dad at the funeral?" asked Madeleine.

"There's no other family, as you know."

"Perhaps some of the Fearnville staff might go."

"They might not be too enthusiastic, given how she treated them."

"She was nicer when she was younger though, wasn't she? You've told me that before."

"She's always been stubborn. One of my earliest memories is her arguing with the vicar over something or other. My step-father intervened on the vicar's side and Mum went into a rant, screaming at them both. It was quite frightening."

"Dad used to call her 'aqua regis'," said Madeleine. "Have I told you that before?"

"Yes, but I can't remember the derivation."

"It was because . . . no, maybe I shouldn't say. It's disrespectful, with Dorothy lying there."

"She can't hear you."

Madeleine smiled sadly. "It was when I was a schoolgirl. I was doing chemistry homework and Dad asked me about it. I told him 'aqua regis' was a very strong mixture of concentrated nitric acid and hydrochloric acid. It was highly corrosive and would just about dissolve anything, even gold. So after that Dorothy became 'aqua regis'."

"I think my step-father worked out a way of putting up with her," said Nigel. "Most of the time he would let Mum get her way for the sake of domestic harmony. But now and then he would take a stand and ignore Mum's tirades. He was like a rock with raging floodwaters foaming round him. I admired his fortitude."

"So sometimes she lost the argument?"

"She had various counter-attacking tactics. Sulking was the initial response. If that didn't work the tears would come. We lost count of how many times Dad broke her heart. Me, too, for that matter. Emotional blackmail, he called it."

"He stuck with her, though."

"He was an honourable man. He took the wedding vows seriously even though he had obviously fallen out of love."

Madeleine shook her head. "Sad."

"And so had I," said her brother.

"What do you mean?"

"I stopped loving her." The pilot stared at the dead body of his mother. "Truth be told, I don't think I ever really loved her, even when I was young. See . . . I told you I was a bad son."

* * * * *

Later that day the pilot and the chemistry professor were taking afternoon tea at The Content Angler Hotel, which sat at the western end of the bridge carrying the A4 road over the Thames in Maidenhead. They had explored all the factors they could think of relevant to Dorothy's interment and the conversation drifted into other areas.

"How's the film star?" said Madeleine after a lull.

"Eh?"

"Emma."

Nigel laughed. "I'm surrounded by celebrities now, aren't I?"

Madeleine frowned. "Which other celebrities did you have in mind?"

"You! You daft thing!"

"Pardon?"

"'The Spitfire Ladies'," said Nigel, quoting the headline over a newspaper article.

"Oh, that."

The report describing the arrival of Chris Coleman's Spitfire at Wycombe Air Park and the fortuitous coincidental arrival of three of the wartime ATA female pilots one day the previous November had initially occupied half an inside page of the local *Chiltern Herald* newspaper. Evidently the report had found its way to the national news desks, resulting a few weeks later in requests for interviews with Madeleine, Parminder Collins and Prudence Dismore-Whyte for a feature in the Sunday Times Magazine.

"Didn't you say Toni was going to turn it into a TV documentary?" said Nigel now.

"I think she's pitched it to Emcro, and they're going to think about it."

"So you'll be a TV star again!"

"I don't think the programme about the methane project and the Rightous Warriors was the most watched programme recently."

"Emcro seem to be happy with what Emma's doing for them."

"How is she coping with the attention?" asked Madeleine. "I saw the report about the programme on the BBC news. They showed clips from the rehearsals."

"Yes, I saw it too. She's started getting fan mail!" said Nigel. "She's handling it pretty well, I should say. No airs or graces. Her school friends think it's great. She signs autographs for them. If it takes off let's hope she keeps her feet on the ground."

"Toni says the crews like working with her."

Emma Holmbeck had turned out to be a natural, so much so that producer Donny Mcleod had asked the

scriptwriter to beef up her part. An unexpected bonus was that the three child actors had become firm friends, with no hint of professional rivalry to poison the atmosphere on set. The camera crews and assistant directors and grips and stage hands were amused to note that the three girls had taken to adopting their Northumberland accents for general conversation on and off set. And at home, Nigel told his half-sister.

"She's even got me doing it," the pilot said now. "So now the latest craze on our flight decks is talking like Geordie miners."

"I'm glad she's enjoying it," said Madeleine. "No doubt it helps to take her mind off Jackie."

"Yes . . . although sometimes we have weepy days."

"Anytime she wants to visit me she's more than welcome."

"She likes you, Maddie. She's said so more than once."

"I like her."

"She asked me why you weren't married."

There was a pause.

"What did you say?"

"That you nearly did get married but your fiancé died during the war."

"Uh-huh."

"She said you were the nicest person she knew . . . after her friends, of course."

"And you."

"She was kind enough to say that." Nigel took a bite of Battenburg and washed it down with a sip of tea.

"What happened to that chap from the . . . what do you call it? The people who were financing your project."

"John Davis. Science Research Council."

"Didn't you go out with him a few times?"

"Yes, once or twice. And we played bridge together."

"So . . . what happened?"

"Nothing. He went away—they posted him to Rio. He's supposed to be coming back soon."

"Will you see him again?"

The professor shrugged. "Maybe."

"It evidently wasn't the romance of the century, then."

"No."

"Do you keep in touch while he's away?"

"No."

"Not like you, Maddie, clamming up like that."

"Nothing to say, Nigel."

"Fair enough."

"On the same subject—what about you? Have you got a new girlfriend?"

"Nope. Been out with a girl a couple of times but I don't think it's going anywhere. I told her I'm still recovering after Jackie so she might move on soon. I don't know."

The pilot summoned the waitress and asked for the bill.

"How's the methane thing going, sis?"

"Okay, thanks. We're sort of settled. I have to go Stateside now and then but that's no great burden."

"He's a bit weird, isn't he, your American sponsor? That's the impression I got from Toni's TV programme."

"Eccentric, certainly. Peel away all the religious stuff and the dubious views on race and you find a decent chap. You should meet him one day. He gets over here now and then to see how we're spending his money."

The waitress returned and Nigel took out his wallet, waving aside his sister's insistence that they split the bill.

The two of them walked to the car park, where Nigel's Vitesse was parked next to Madeleine's Morris Minor.

"You'll be able to take the lid off that thing now spring's here," said Madeleine, pointing to the Triumph's soft top.

"Minimum air temp sixty-five for that," grinned Nigel. "For me, anyway."

His half-sister grinned back. "Don't tell me . . ."

"Correct! SOP, dear thing!"

"Talking of aeroplane stuff," said Madeleine, "I forgot to tell you. I've got my PPL back." She was referring to her Private Pilot's Licence.

A broad grin settled on her brother's face. "Fantastic, Madds. I always thought it was aviation's loss when you gave up serious flying. We must do a trip together. You can show me how it's done. What type are you flying? The Piper spam can?"

Madeleine nodded. "And I'm checked out on the Chippie too so I can do aerobatics."

"I'd love a go in the Chipmunk. It's ages since I've been upside down in a flying machine."

"Pammy's doing it too."

"Pammy Collins? Our ATA chum?"

"She couldn't stand back and watch me requalify while she got left out, she said, so she's doing her PPL too, although she's sticking to the Cherokee for the moment. We still do trips together with Dizzy . . . what are you laughing at?"

"Something Frank Armitage said a while ago. An ironic comment about the likely lack of conversation when three women were flying together."

"Cheeky sod!"

"That's Frank!"

CHAPTER 22

There was a full complement in Lab 2C except for James Ibsley, who was off sick with a cold. The three remaining PhD students were perched on their lab stools as usual. Safety Officer Bill Syerman had brought in two chairs for the remaining attendees—Professor Madeleine Maunsell and sponsor Maxwell Murdoch, who had finished speaking just as Verity Abbott brought in four teas and a coffee and a selection of biscuits.

The post grads were thoughtful, assessing the impact the American's words would have on their lives. Madeleine had already been briefed so the new situation was no surprise to her. Max had asked her not to spill the beans until he had had a chance to speak to the post grads directly himself. He thought it his duty to reassure them personally, he had told her. Max also relayed a more personal message from Gordon McKenzie asking Madeleine to pass his love on to Toni but to keep some for herself.

"Just to be clear," said Luke Stirling now. "Although you're pulling the plug on methane reformation research in Wilmington you'll carry on funding us on our PhDs?"

"That's right," said the CEO of Southern National Generation. "As I said, I'm quitting the project myself because I've realised it's a waste of time and money. No one thinks the CO₂ in the atmosphere is gonna cause a problem for while and some people say if the levels go up the world's forests will soak up the extra. But the new deal is that I'm gonna start closing down my coal power stations and converting them to nuclear 'cos I think eventually nuclear will make electricity cheaper than coal can. So that'll cut down the CO₂ I'm pumping out. Once I start doing it others will follow. So it's bye-bye to methane reformation. Sorry, Madeleine!"

The chemistry professor smiled wistfully and shrugged.

"So you're saying nuclear power generation will cost less than coal?" asked Joe Curtis, raising his hand, which had been resting on Xiu Ying's on the work bench. "How long will that take to happen?"

"The more nuclear we build the cheaper it gets 'cos we get better at building them, Joe. All I've gotta do is spread the word of the Lord. He wants clean air and we're gonna give it to him. Like I said, we'll switch from coal to nuclear. So we don't have to mess with methane."

"What about other countries?" asked Xiu Ling. "They'll still be burning coal, won't they?"

"And the Soviets won't be bothered about the word of the Lord," observed Luke. Madeleine quickly glanced at her protégé, ready to scold him if it looked like his words might offend their sponsor, but there was no smirk of sarcasm on his face this time.

Max laughed. "Well, they don't pump out as much as we do," he said. "We can cut them a little slack to start with. Like I said, if we build enough nukes the power they produce will eventually be cheaper than coal so unless the Reds convert they'll lose out economically."

"So you can convert them to nuclear even if you can't convert them to God," joked Joe.

"You said it, fellah!" grinned Max. "But maybe we can change that, too. You know, there are millions of Russians who secretly worship the Lord. Probably the majority of the population. They would love to see Christ the Saviour rebuilt."

"What's that?" asked Luke.

"Cathedral in Moscow. Stalin knocked it down in the Thirties. They were gonna build a government building there but gave up when the Germans invaded. Khrushchev turned it into a swimming pool, which it still is. But who knows . . . maybe one day they'll get their cathedral back."

"So we're going to carry on as before, are we?" asked Joe, bringing them back to the essence of the discussion.

"Unless something unexpected crops up, then yes."

"Why would you carry on funding us," continued Joe, "if you've decided to scrap methane reformation research?"

"Because I said I would. Plus I like what you're doing with improving catalyst performance so SN would get some benefit out of that."

"What'll happen at Wilmington?" asked Madeleine. "Are you cancelling the small reactor experiment?"

"Not for the moment," replied Max. "It's useful work, even if we don't use it to fry methane and CO₂. If it works okay we can maybe offer our design for other purposes, like ships and subs. The Pentagon might be interested. We could snatch some of the Westinghouse contracts. A bit of healthy competition won't do them any harm."

The conversation moved into more technical areas and when the questions explored topics beyond the sponsor's expertise, Verity was summoned to commit them to paper for the Wilmington team to look at.

"Well, if you'll call a cab for me, I'll make my way back to my hotel," said Max eventually. "Are we still on for dinner tonight, Madeleine? Dave Montgomery—my PA—will be with us of course."

"Yes, I'd like that, thank you."

"What about you kids?" asked Max. "You coming along too? My tab."

"Could I bring my girlfriend?" asked Luke. "She's free tonight. She would pay, of course."

"No, sir! No deal! She sits at my table, I pay. That's the way it goes. Joe and Suzie—what about you?"

"We're going to the pictures," said Xiu Ying, "but thanks for the invitation."

"Whaddya gonna see?"

"Bonnie and Clyde."

"Good movie. You'll like it. I know the director—Art Penn—he knows how to make good pictures."

The meeting concluded, Verity was asked to phone for a taxi, to be told that there might be a wait because demand was unusually high.

"They say fifteen to twenty minutes," said Verity.

"I can live with that," said Max.

"Would you like to see the other labs while you wait?" asked Madeleine. "We've got some interesting stuff going on here."

"Sure, honey. Lead on."

"Did I read somewhere you were setting up a new Christian society in Britain?" asked the professor as they strolled along the corridor.

"Yeah. I'm doing an interview with the BBC about it tomorrow. A few people approached me to start a chapter of the Righteous Warriors here in England."

"What sort of people?"

"Can't give you names, Madeleine, not yet anyhow. Confidential. Some business people, some politicians, couple of bishops, couple of movie actors. When the time is right we'll make an announcement."

"Will it be the same as the American set-up?"

"Pretty much."

"What will it be called?"

"We haven't decided yet. I'd kinda like to use the name we have now."

"Talking of TV programmes, my friend Toni enjoyed producing the interview with you in Wilmington," said Madeleine. "I'm sure she'd be happy to do it again if required."

"I'll keep it in mind. I liked her, even if she was a bit too hippy for me." The American chuckled. "She hit Gordon McKenzie like a tornado. Wore him out, I reckon!"

"I can imagine," murmured Madeleine.

In Lab 1D the professor and her visitor found a male student in deep discussion with an older man of Asiatic appearance.

"Everything okay?" asked Madeleine with a smile. She made the introductions.

"Max, this is Larry Rutherford, who's doing his PhD, and Dr Phan Hoc, who's his supervisor. They're looking at various methods of synthesising cyclopentane."

"What's that used for?" asked the American.

"It can be turned into other useful products."

"We're getting strange results according to Fido," said Dr Phan, speaking accented English. "If it's giving us correct info it means we're getting better yields from cracking cyclohexane than we would expect and we don't know why this should be."

"What's a Fido?" asked Max.

Madeleine laughed. "It's a flame ionisation detector." She pointed to a Walt Disney character clumsily drawn in felt tip on the equipment's metal casing.

"Hey, that's Pluto!" grinned Max. "Not Fido!"

"If you say so!"

"It's analysing the gases, is it?"

Dr Phan nodded. "Yes, we use it a lot in gas chromatography."

"Say . . . tell me if I'm out of line here, but are you Japanese?"

"No. I am from Vietnam."

The American raised his eyebrows.
"Whereabouts?"

"Hung Yen."

"Is that anywhere near Saigon?"

"No, it's about thirty kilometres southeast of Hanoi."

"North Vietnam?"

"Yes."

After a pause, Max cleared his throat. "How long have you been in England?"

Dr Phan smiled. "Over ten years. I did my degree here at Oxford."

"That's swell. Will you go back after the war is over? Have you got family there?"

The scientist briefly ran through his personal history. Despite the harsh Japanese occupation during the war and the subsequent fighting between the French colonial forces and the communists after the defeat of Japan life was stable enough for him to complete his education. His tutors were impressed with his grasp of physics and chemistry and sent in an application for their student to attend Oxford University to study for a degree. When he was accepted a fund was set by his family up to pay for the course.

"How did that work?" asked Max, interrupting the narrative. "Wouldn't they have wanted to send you to college somewhere in Vietnam?"

Dr Phan nodded. "There was a problem with this. Some people said my Dad was a traitor, sending me

to a Western university but he insisted I go to Oxford like my tutors suggested. He was a war hero so they respected his wishes."

"A war hero?"

"He killed many Japanese soldiers during the occupation. And some French soldiers too when they tried to take over."

"Impressive. So do you ever get to see your family or is it impossible now because of the war?"

"I haven't been to Vietnam since I left to study here. But I'd like to go back to visit them as soon as I can. My mother is not very well and I would like to see her. It might be possible for me to travel via Moscow. I've been corresponding with the Soviet Embassy in London and they say it might be possible."

Intrigued, the American probed further into the Vietnamese scientist's background. It seemed his younger brother was a teacher in their home town of Hung Yen. The town had been bombed a few times when South Vietnamese or American forces thought the Viet Cong had set up bases there but the town council had managed to keep the school going. The last Dr Phan heard, the classes were being conducted in a warehouse while the school was being repaired after bomb damage.

"How do you keep in touch?"

The scientist smiled. "Via Moscow. I like to send money home to support my parents and my brother."

The American was incredulous. "You send them English pounds?"

"No. I go to the bank here and buy roubles. I send the roubles to a friend in Moscow. He is a friend of my

Dad's who works there and he sends the letters and roubles to Vietnam. I think they go on Aeroflot flights and military transport planes."

"And your family can use roubles in Vietnam?"

"No, they have to change them into dong, the local currency. The arrangement isn't strictly legal so a large percentage of the money goes in . . . commission."

"So what does your Dad do?" asked Max.

"He's got a shop . . . three shops in fact. He sells fruit and vegetables."

"So do your folks live near your brother?"

"No, the shops are in Hanoi, two in the centre of town, one on the riverfront."

"The riverfront?"

"Yes. It's a good place for a shop 'cos it's very busy these days. A lot of fish comes in by boat 'cos the railway from the coast is often out of use . . . it gets bombed a lot. So people come to buy fish and then drop into my Dad's shop to buy vegetables." The scientist laughed. "Last letter I got from Dad, he told me to stop sending roubles 'cos he's making enough money in his shops."

"That's good," said Max, looking down, his voice strangely muted.

"Ah, there you are," came a call from the doorway. It was Verity Abbott. "I've been looking for you everywhere. Your taxi's here, Max."

CHAPTER 23

Overall the party had gone well, thought Madeleine, cruising along the short embryonic stretch of M40 motorway between Stokenchurch and High Wycombe in her Morris Minor. The April air temperature would nudge sixty-five degrees later in the day according to the forecasters, warm enough for her brother to "take the lid off" his Vitesse if he was driving it that day.

Apparently the bash at the Hart and Serpent pub in Oxford was Joe Curtis's idea. The original intention was to organise a surprise party for the post grads' mentor to thank her for all the effort she had put in to secure continued funding for their PhDs. Then somebody found out that the proposed date was close to the professor's birthday and the post grads decided to let Madeleine in on their plans so she could invite friends and relatives if she wanted. So the celebrants included Bill Syerman and Verity Abbott and Nigel Nixon and Emma Holmbeck and three

members of the All Souls church choir, including Toni Clark.

Neither Prudence Dismore-Whyte or Parminder Collins were able to attend but they had arranged a separate do at Wycombe Air Park, where Madeleine was now headed.

During the party at the Hart and Serpent a phone call had come through from Wilmington, North Carolina and Maxwell Murdoch and Gordon McKenzie had both come on the line to wish Madeleine Happy Birthday. For some reason she found tears in her eyes and she found herself apologising to the assembled company for her lack of self control. Toni had thrust a glass of wine into her hand and told her to "let it all out, sister".

Later in the evening she had been sitting chatting to her brother and Emma, quizzing the girl on the TV programme she was taking part in. Nigel got up to talk to another guest and Madeleine turned to her young friend.

"Are you enjoying the acting, Emma?"

The girl nodded. "Mostly, yes. They're nice people I'm working with. One or two of the actors are a bit . . . bossy. They keep telling us what we should be doing. The director is a bit of a perfectionist—makes us do retake after retake until he's happy."

"So it's hard work?"

"A lot of it is just hanging around, Auntie Maddie. Even on set we're only rehearsing or filming a small part of the time. In between scenes they're changing the lights and camera angles and it seems to take ages."

Madeleine laughed. "Sounds a bit like airline flying. Nigel says his job is ninety-nine percent boredom and one percent terror. I'm sure he's exaggerating."

"Some of the actors say it was even worse before videotape was invented," said Emma. "At least nowadays they can see straight away what's been recorded. In the old days they would have to wait for the rushes to be developed."

"Will it be colour?"

"Black and white. For colour they would have to use film, which would slow things down even more. I suppose one day they'll use colour videotape."

"But overall, it's enjoyable?"

"Yes. We get treated much better than the extras. I feel really sorry for them."

"Why?"

"They don't get paid much and they get pushed around from pillar to post. On meal breaks they have to wait until the actors and all the crew have been served before they're allowed to choose their own food. One or two of them are a bit nasty to us."

"Perhaps they're jealous of you."

"Yes, that's what some people say."

"Will you carry on acting after this job?"

"I'd seriously think about it if people said I was good at it."

"What are your favourite school subjects?"

"Art . . . and Maths . . . and French . . . and Physics. Nigel finds out from the headmistress what lessons I'm missing at school when I'm acting and he's fixed up tutors for me so I don't miss any important work."

"If you like maths and physics you could be a scientist when you leave school."

"Like you, you mean?"

"Yes."

"Nigel says you're an expert on pollution in the atmosphere. You must be very clever to understand that."

"I'm not an expert. I do research into carbon dioxide emissions from power stations to see if we can protect the atmosphere."

"Is it a bad thing, then?"

"It could be in the future."

"Why? What does it do?"

"Do you know about atoms and molecules?"

"We've just started learning about them."

"Right. The sun's rays hit the earth and some of the rays are reflected back towards space as infra-red. But some of the reflected infra-red hits carbon dioxide molecules and makes them spin and vibrate. This extra energy is transferred to the other gases in the atmosphere and heats them up, which could change the weather, say some experts. More floods, more droughts, more hurricanes and so on."

"Is there a lot of CO₂ in the atmosphere, then?"

"About one molecule in every three thousand."

"That's not much! Why don't the other molecules spin and vibrate—the oxygen and the nitrogen?"

"There are only two atoms in those molecules, Emma. CO₂ molecules have three atoms. It takes photons of different wavelength to affect the other gases, not infra-red. Have you learnt about photons yet?"

The girl shook her head. "No."

"I expect you will in time."

"So nobody's worried about the CO₂ at the moment?"

"That's just about it, Emma. That's why our project is winding down. But in the future they may need to use the research we're doing now."

"Maybe I could be a pilot, like you," said the girl in a non sequitur.

"It's more difficult for girls to get into flying, but maybe that'll change in the future. Has Nigel taken you on any of his trips?"

"Not yet. He says he will when I'm older."

"It'll be fun."

Emma tilted her head. "If Nigel gives me permission, would you take me up in a little plane, Auntie Maddie?"

"Of course! I'd love to."

"I'll pick a moment when he's in a good mood."

"Are things okay at home now?" asked Madeleine.

"You mean, after Mum's death?"

"Yes."

"Yes, thanks, Auntie Maddie. Sometimes we both get sad but we can cope with it."

"Is Nigel still going out with . . . I've forgotten her name."

"Sophie? I'm not sure. I haven't seen her for a while so I don't know if they're still going out. It's strange, sometimes Nigel sits in a chair at home and goes into a sort of trance."

"Trance?"

"Yes, like he's turning things over in his mind."

"About your Mum, do you think? . . . or Sophie . . . or something else?"

"Don't know."

"Do you ask him about it?"

"No . . . I wouldn't know what to say."

"How long do the moods last?"

"Not long. He'll take a deep breath and sort of shake his head and then he's back to normal." Emma looked into Madeleine's eyes. "You shouldn't be sad, Auntie Maddie."

The professor quickly smiled. "Was I looking sad?"

"Not at the moment. But sometimes . . . you're like Cordelia . . . you look as if things are not going right."

"Sometimes I feel a little . . . I don't know . . . weary, maybe."

"You're better off than Cordelia 'cos you've got people who love you, like all the people here at your party. Most of all, I love you and Nigel loves you."

Madeleine blinked rapidly and took a tissue out of her handbag to blow her nose. She cleared her throat.

"I love you too, Emma."

* * * * *

Well, I'm not sad or weary today, thought Madeleine now as she turned off the motorway. It was a lovely day and she was going to meet two of her oldest friends.

Parking the Morris alongside the clubhouse the professor noticed a couple of gliders circling over Marlow a mile to the south at about two thousand feet. Approaching the airfield itself the Piper Cub tug

aircraft was sinking towards the grass area south of the tarmac runway, its trailing tow cable flicking in the aircraft's slipstream. A Wycombe Flying Club Cherokee was also approaching to land. Madeleine instinctively watched the two arrivals. The Cub flared just above the grass, touched in a perfect three-pointer and rolled quickly to a stop. The Cherokee arrested its descent ten feet up, losing speed, and then started to drop. Madeleine waited for the crunch when it gave up the struggle to keep flying and hit the runway. But a sudden roar of engine caught the fall and held the aircraft in its intended medium. Recovering from its abuse, the machine groggily climbed away for another circuit. Madeleine wondered whether the saviour was an instructor taking control or a student realising his or her error and correcting accordingly.

On the apron were a few more Cherokees and Cessnas, the Wycombe Flying Cub Chipmunk and a vintage Auster. By the hangars stood Chris Coleman's Spitfire and a replica First World War Fokker Triplane.

Very agreeable, thought Madeleine as she locked her car, enjoying the sights and sounds of a busy airfield on a lovely spring day.

"Happy birthday to you . . . happy birthday to you . . ."

Parminder and Dizzy were walking towards her with grins on their faces.

"Thunder, lightning and rain," greeted Madeleine.

"Hurly-burly," responded her friends in unison.

After a few minutes swapping gossip and news the three ATA friends went to the restaurant for morning

coffee and Parminder and Dizzy handed over their cards and presents.

"Ah, the birthday girl." It was Chris Coleman, who had just come in carrying a small book. "They said you'd be here yakking to Pammy and Dizzy."

"Damn cheek!" protested Parminder. "We do not yak—we exchange views."

"If you say so! So, girls, are we on for the quiz?"

"Yes," said Dizzy.

"Ready when you are," said Parminder.

"What quiz?" asked Madeleine.

"Right," said Chris, "let me grab a coffee and we'll start."

There was some discussion about which of the ATA pilots had dreamt up the idea of testing their memory of the technical details of one of their wartime mounts, namely the Spitfire Mark V, an example of which was basking outside in the spring sunshine.

Seated back at the table, Chris held up the book he had brought in. The others could see that the title read "Spitfire Mark V Pilot's Notes".

"Right," said Chris. "I'm the question master and umpire. In the case of disputes my decision is final."

"Hang on," said Madeleine, addressing her friends. "If you two knew about this you've probably done some revision."

"Heaven forfend!" smiled Parminder.

"That would be cheating," added Dizzy.

"Okay, what's the prize?" asked Madeleine.

"Magnum of Bollinger chilling as we speak," said Chris. "The winner is expected to share it with the losers . . . and the quizmaster." His glance swept

round the three ladies. "Let battle commence. First to answer correctly wins the point. Question 1 . . . max take-off RPM and boost?"

"Three thousand, plus sixteen inches," said Parminder.

"Two eight fifty, twelve inches," said Dizzy.

"Three thou, plus twelve," said Madeleine.

"The birthday girl has it," said Chris. "Question 2 . . . what is the normal air pressure in the pneumatic system?"

"Three hundred," chanted three voices simultaneously.

"Good . . . a point each," said Chris.

Madeleine pleasantly surprised herself with the accuracy of the gen that her memory had retained but it didn't take long for her to realise that her friends were letting her win the competition. Eventually she held up her hands. "Okay, you lot, that's enough. Let's call it a draw and throw that Bolly down our throats."

"That was only part one of the quiz," said Chris. "Now we'll go outside and check your practical knowledge."

Chris had arranged for a photographer to take pictures of the ladies in front of the Spitfire. There was only one flying suit and one pair of boots so they took it in turns to don the wartime garb and pose for the camera. First was Dizzy, then Parminder and finally Madeleine.

"Right, let's have a piccie of you in the cockpit," said Chris.

"Love to," said Madeleine, climbing on to the wing and stepping inside. "Haven't done this for . . . what . . . over twenty years."

"Here . . . hold this," said Chris, standing on the wing outside the cockpit. It was a flying helmet. "Now smile for the camera."

And then the professor saw the trolley accumulator being wheeled up to the aircraft by two of the maintenance crew. Her mouth opened in surprise as they plugged the accumulator cable into the aircraft's external power socket. She turned to look at the Spitfire's owner.

"Chris, what's happening? Are you going to start the engine? Are you going to fly it?"

"No, Maddie, you are."

"What!"

"Happy birthday!"

The chemistry professor began to protest but her wartime colleague held up his hand to silence her.

"You've just proved you still know the important stuff. And Dizzy told me you've got recent tailwheel time on the Chipmunk. So now you're going to show us you can still handle a Spit."

Madeleine looked down to see Dizzy and Parminder grinning at her, thumbs up. And standing next to them . . . Nigel! Her brother had appeared from somewhere, joining in the fun.

"You horrors!" she grinned back. "I'll kill you! You set the whole thing up!"

"Guilty!" laughed Dizzy.

CHAPTER 24

Chris continued the pre-flight briefing while the ground crew fussed round the aircraft. A growing crowd of onlookers watched the proceedings with interest.

"There are a few differences since the last time you drove one of these, Madds. You'll see the old push-button four-channel VHF is gone but the new 360-channel set is located in the same position. It's a Narco, just like the Cherokee. You've got a VOR as well if you need it. The press to transmit button is on the throttle, like it used to be."

"Okay."

"Airspeed in knots—some of the earlier Spits had miles."

"I noticed that."

"I've deactivated the boost control override to preserve the engine but there's still plenty of power. Feed in the throttle slowly on take off and remember it's right rudder to keep straight—the opposite of the Chippie."

"Will I need to do a full power run-up?" asked Madeleine, fastening her parachute harness and seat straps.

"No—we did one earlier. Maybe a mag check at two thousand RPM but keep an eye on radiator temp. You should be okay as long as you don't loiter—the air's not too warm today."

"Rad setting when airborne," said Madeleine. "Red triangle, as before?"

"Correct, but check the temp and adjust if necessary."

The professor's right hand moved to the top of the stick and her thumb caressed the guard over the gun firing button. She grinned at the Spitfire's owner. "Okay to shoot any one down who gets in my way?"

"You'll have to go dak-a-dak-a-dak yourself, Maddie. Sadly the guns are empty."

"Shame."

"Quite. I've kept the button there for authenticity for when I do film work. Ditto the VHF—I've made a cardboard replica of the original which covers the new kit."

The discussion moved on to navigation and airspace restrictions. Chris pulled out a chart from the stowage left of the pilot's seat.

"You know the local area well from your Cherokee flying, don't you," said Chris. "Stay below the TMA till you're north of the Chilterns. I usually head towards the Vale of Aylesbury for general messing around and if you stick below eight thousand you'll be legal. Base of Amber One is eight-five out there on ten thirteen."

The Spitfire owner was referring to airspace restrictions and altimeter setting procedures.

"No shortage of landmarks round here," said Madeleine. "It would be difficult to get lost . . . famous last words!"

"Plus you've got the VOR. It's tuned to Garston but you can change it if you want, of course."

"Okay."

"You've got full tanks, Maddie, so if you fly for an hour, say, you'll have plenty of reserve."

"Okay."

"Give the tower a call when you're on the way back and we'll launch the camera ship."

"Camera ship?"

"Nigel and I will get airborne in the club's Comanche and head out to meet you. If you formate on us we'll take some photos."

"Right, but tell me if I'm getting too close—it's twenty years since I've done any formation."

"We trust you!"

"Good . . . what's my callsign, by the way?"

"We've told the tower to listen out for 'Spitfire Maddie.'"

"Easy to remember."

Chris held out a conventional headset to swap for the wartime helmet. "This'll be more comfortable for you." He plugged in the headset, checked Madeleine's straps and stood back.

"You're on your own, Madds."

"Thanks so much, Chris. I'll try not to bend it!"

The Spitfire's owner hinged the door up to the closed position and Madeleine secured it from inside

the cockpit. Her eyes swept the controls and indicators one more time and then she looked outside to see Chris clearing spectators and unnecessary equipment out of the way.

Madeleine gave the engine a few squirts of primer and then checked the primer was locked. She set the throttle slightly open and checked outside to make sure the areas round the big three-bladed prop and behind the tail were clear.

She switched the magnetos on and called out, "Contact!" Outside, Chris was giving her thumbs up.

Madeleine held the stick back with her left hand and with her right pressed the starter and booster coil buttons. The starter turned the Merlin through a few blades and the engine coughed and then caught, one cylinder . . . two . . . soon all twelve cylinders were firing and a whiff of exhaust smoke took the pilot back twenty years.

Oil pressure, fuel pressure, brake pressure good. Gyros erecting. Check the individual magnetos. All good. Madeleine signalled "Disconnect equipment and chocks away" and watched the ground crewman move the trolley accumulator clear.

Madeleine pressed the transmit button. "Wycombe, Spitfire Maddie taxi for local area."

"Good afternoon, Spitfire Maddie, taxi for runway two five, QNH one zero one seven, do you want the grass or the hard?"

"Grass runway, please."

"Roger, advise ready for take-off."

The pilot acknowledged and set her altimeter. A glance right and left. At the wing tip Chris gave a

wave and Nigel blew her a kiss. Release brakes—an inch forward on the throttle and the Merlin crackled its compliance. The Spitfire rolled forward and Madeleine brought her throttle back to idle. Even at minimum power the mighty Merlin could pull the aircraft across the apron at a comfortable pace.

Taxying out, weaving the nose to check all clear ahead, with frequent glances at the radiator temperature, the pilot was again transported to White Waltham during the war years. Those beautiful elliptical wings, the rumbling of the idling Merlin a tiny hint of the thousand horses it could unleash, the smell of the cockpit. Was it really over two decades ago?

Five minutes later Madeleine was at the holding point, checks complete, hood forward and closed. Rad temp still rising but below limits. Time to go!

"Spitfire Maddie, ready for take-off."

"Spitfire Maddie, cleared take-off, two five grass, wind one nine zero, four."

Madeleine released the brakes and slowly inched the throttle forward with her left hand, the growl of the Merlin swelling into a roar. A generous bootful of right rudder kept the aircraft's nose pointing straight. A glance at the airspeed indicator confirmed speed building. With the stick neutral the Spitfire quickly lifted its tail and after two hundred yards or so eased itself into the air.

Happy that her aircraft was climbing and accelerating, Madeleine swapped hands on the stick and selected undercarriage up. Remembering Chris's entreaty to nurse the engine she throttled back a little and reduced prop RPM, adjusting attitude to stabilise

the speed at one sixty knots. A bank to the right swung the nose northwards until the fat concrete pillar of the Stokenchurch telecomms tower was visible ahead and left as an orientation check. Conscious of controlled airspace above, Madeleine brought the throttle further back to reduce her rate of climb.

Then the Chilterns were behind her and the pilot opened up her Merlin again to soar to six thousand feet, where she levelled off and pulled into steep turns left and right to check her position and confirm there were no other aircraft nearby, the 'g' forces pushing her down into the parachute pack cushion acting as her seat.

The next twenty minutes were sheer delight. Madeleine threw the aircraft around in a sequence of loops, barrel rolls, chandelles, stall turns, and slow rolls. Inexplicably she found herself laughing out loud and singing snatches of the old Max Bygraves song "Out of Town". Absurd! A grown woman edging towards her half century fooling round like a kid with a new toy!

"Spitfire Maddie, are you still on frequency?" came the voice in her headset earphones.

"Affirmative."

"Roger, we have a request."

"Go ahead."

"RAF Halton have requested you do a low level pass."

"Of course."

"Roger, change to one two two point one and give them a call. They're expecting you."

"Roger."

Madeleine did an orbit to check her position. As she said to Chris, how could anyone get lost round here? In the excellent visibility she could see the new Didcot power station cooling towers, the line of the Chilterns with a lazy column of smoke drifting upwards from the cement works at Chinnor and the three railway lines converging at Princes Risborough. To the east lay Aylesbury, to the west Oxford and closer were the disused airfields at Oakley and Westcott.

Madeleine stopped her turn on a gyro heading of one zero zero and throttled back to start descent. A check of the instruments and gauges and fuel remaining confirmed all in order. She changed the transceiver frequency and called Halton.

"Good afternoon, Spitfire Maddie, advise when you're five miles out and we'll clear you in for a run in."

"Roger," replied Madeleine.

A different voice came on the air. *"Spitfire Maddie, this is Benson, do you read?"*

Madeleine remembered that 122.1 was the common frequency for aircraft fitted with civilian radios to contact military bases. Benson was an RAF base a few miles east of Didcot.

"Loud and clear, Benson," responded the pilot.

"Roger, can you fit us in after you've beaten up Halton?"

"It will be my pleasure!"

* * * * *

Madeleine roared along runway zero one at Benson as low as she dared with the airspeed indicator needle quivering at 270 knots, just over 310 mph. Briefly the old Air Force joke flashed through her mind:

"Poor old so-and-so pranged yesterday."

"What was he doing?"

"About three hundred knots!"

Passing the airfield boundary she pulled up vertically until the speed dropped below two hundred then eased the nose forward while rolling on right bank.

"Thank you, Spitfire Maddie," said the Benson controller in the pilot's earphones. *"We liked that. When you're clear change back to Wycombe."*

On the Wycombe frequency she heard Chris's voice. *"Spitfire Maddie, this is Lima Oscar, if you read us, say your position."*

Madeleine straightened up on heading zero four five, altitude two thousand. "Reading you, Lima Oscar, I'm three miles west of Stokenchurch. Say your intentions."

"Okay, Maddie, we're just south of Thame at two point five. We're heading one eight zero, looking for you."

The chemistry professor looked left. A black speck was visible just above the horizon.

"Tally ho!" she transmitted. "Got a visual on you, Lima Oscar."

"We see you too, Madds. We're indicating one forty knots, two point five, turning left heading zero five zero."

"Roger, Lima Oscar," replied Madeleine, "where would you like me, port or starboard echelon?"

The Comanche's speed was a mere dawdle for the Spitfire and Madeleine closed rapidly, throttling back to formate behind its tail to the right, lifting her nose a little to increase the wing's angle of attack to compensate for the reduced airspeed.

"That's a good position, Spitfire Maddie. Hold it while we take some pics."

After easing over to the other side of the Comanche for further photos Chris announced he was turning left to reverse course, Madeleine holding station throughout.

"Good stuff, Madds," heard the professor after a few more minutes. *"We've got what we want. See you back at Booker. We'll follow you in but we'll hold clear if you want to do a run and break."*

"Roger, Lima Oscar, I'm breaking off."

Madeleine swung east towards the Hughenden valley running from Princes Risborough to High Wycombe and called up the field.

"Wycombe, Spitfire Maddie, rejoin."

"Welcome back, Spitfire Maddie, join right base or long finals for runway two five. You're number one for a run in."

For the third time that day Madeleine roared along a runway a few feet off the ground at breakneck speed, the Merlin snarling in front of her. Controlled airspace above Booker precluded a vertical climb so the pilot eased the throttle back and lifted her nose slightly to bring the Spitfire up to circuit height while killing her speed. A gentle right turn brought her on to

the downwind leg and she lowered the undercarriage and ran through her landing checklist.

"Spitfire Maddie, downwind."

"Spitfire Maddie, cleared to land two five grass, wind light and variable."

A curving descending approach lined her up with the grass runway. Madeleine lowered her flaps, the hiss of pneumatics touching another chord of nostalgia. She let the drag ease her back to 80 knots, the Merlin crackling a smidgen above idle power.

Over the new M40, sinking towards the runway threshold, throttle fully back, hold her off, back on the stick . . . back . . . back . . . she touches! Three pointer! A little rudder to keep her straight and a touch of brake to slow her.

"Nicely done, Spitfire Maddie, you're cleared to taxi to the apron."

CHAPTER 25

Well, that was a lovely birthday present, thought the chemistry professor as she headed home in her Morris Minor. Thank you, Chris Coleman! And thank you Dizzy and Parminder and Nigel, who together with Chris had organised it all. She would have to find some way of repaying them.

Another group of enthusiasts had welcomed the Spitfire on its arrival back at Booker, including the ex-ATA pilots. When Madeleine pulled the cut-out to stop the engine and slid her hood back a mighty cheer arose, audible even to her Merlin-deafened ears. Amongst those pointing cameras and cine-cameras at her she recognised the *Chiltern Herald* reporter who had previously interviewed her.

It took half an hour to answer all the questions thrown at her and satisfy the photographers who wanted pictures of her and her ATA friends in various combinations. Finally the spectators drifted away and Chris began to organise the Spitfire's post-flight

handling, telling the ladies he would join them in the restaurant for Bollinger and cucumber sandwiches.

If Emma could see me now she wouldn't think I was sad, thought Madeleine as she steered her Minor along the A40 through the little village of Tetsworth. A couple of hours previously she had been cavorting in the clear blue sky above this little corner of Oxfordshire in that beautiful flying machine. What a perfect spring day. The Spitfire. Her friends. The champagne. She had declined a third glass so her brain wouldn't be too befuddled on the drive home.

No, life was good, all things considered. Maxwell Murdoch had promised that Oxford's methane reformation project would be kept going until Madeleine's post grads had got their PhDs, after which it would almost certainly die. So be it. Perhaps the professor had indeed "backed the wrong horse", as her old rival Alfie Grove at the Science Research Council had suggested. If the rest of the world judged atmospheric CO₂ levels to be unworthy of attention perhaps it was Madeleine who was out of step rather than them.

The students were already planning their futures. Luke Stirling was now engaged to girlfriend Gill Bradshaw and it looked like he would join the Bristol based pharmaceutical company where Gill worked once his doctorate was successfully completed. Luke's version of events was that she had proposed to him and he had accepted as long as he didn't have to join the Labour party. Gill's account, as relayed to Madeleine by Xiu Ying, was that Luke had popped the

question and she had accepted as long as he didn't try to prevent her becoming a party member.

Xiu Ying and Joe Curtis seemed to be headed for a future together in Hong Kong. Joe had visited his girlfriend's parents and announced to his colleagues that he had "passed Suzie's Dad's selection procedure".

James Ibsley's girlfriend, Stephanie, had proved her devotion by turning down a leading role in a dance show in Sydney, Australia so she could stay with him in the UK. Suppose Broadway summoned, he had queried. James related to his colleagues that her response was that she'd immediately dump him. He hoped she was joking.

Madeleine's future looked promising, academically at least. She had taken up ICI's offer of managing their new aromatic polyamide development project. As the methane reformation work ran down the ICI task would build up momentum. To confirm his support for the remaining MR work Maxwell Murdoch had even gone so far as to present Madeleine with a legal document obligating Southern National Generation to funding as required (up to defined limits) until the post grads had finished their practical work, or until 1159 p.m. Eastern Standard Time, December 31, 1968, whichever came first.

Strange man, Maxwell Murdoch, thought Madeleine. Religious zealot and larger than life character, following the American tradition of ruthlessly amassing a fortune and then dispensing some of it in philanthropic largesse, although it was likely that MR funding was a mere trickle compared to

the flow of Murdoch dollars into the Righteous Warriors coffers. Strange man, getting stranger, judging by a report Madeleine had read in her paper recently.

It seemed that a faction in the Warriors had hatched a plan to plant a nuclear bomb in the centre of Hanoi, North Vietnam, to force the Communists to surrender and so end the civil war tearing the country apart. The plotters had supposedly approached Max Murdoch and asked him to supply a suitable nuclear device but instead of allying himself to the cause he had reported the plan to the CIA and the FBI. The plotters had refuted the allegation and were now threatening to take legal action against Max, citing defamation of character and accusing him of attempting to falsely stigmatise them with the intention of displacing them from the ruling council and taking more control himself. The Warriors were now dividing into the Murdoch camp and the Hartmann camp, hurling insults at each other. Both factions declared that God was on their side.

Which group was telling the truth? wondered Madeleine. Max was certainly a bit eccentric, but to invent such a far-fetched story . . . that would really be weird. A determined man, yes, but she'd never thought of him as a power-crazed schemer. Anyway, she would be able to ask him all about it soon because she would be meeting him on his native territory.

The trigger for the New York trip was her brother's roster. Heathrow to JFK, two night stopover and return. Nigel had offered to take her along as

supernumerary crew and she had readily agreed. The chemistry professor had mentioned the visit in a phone call to Max and he had said he would see her in New York as he had a business meeting there. By coincidence he would be travelling to England on the same day as Madeleine. He told her he would cancel his reservation on Pan Am and rebook on Nigel's flight.

A further bonus for Madeleine was that according to Nigel the rostered flight engineer was Frank Armitage, another colleague and friend from ATA days. She hadn't seen him for a while and it would be a good chance for a catch up. A faint bell in her memory told her that he made reproduction antique clocks as a hobby. A new clock for her dining room had been on her wish list for a while. If the price was right maybe Frank could supply one.

Perhaps the only missing element in Madeleine's life was romance. Sometimes she would find herself wondering whether she should have given in to Gordon McKenzie during her first Wilmington visit. Of course that was not really romance . . . rather raw sex. Which did she really want? The honest answer . . . both!

Surely she wasn't too old for physical love? But there weren't any available men in her orbit. Those who had made advances in recent times were either married or . . . yuk! There was a glimmer of hope, however. John Davis had sent a letter saying he was back from his Rio posting and would she like to meet him for bridge or a trip to the theatre?

Yes, she would! And she would certainly give in to him if he made advances. Judging from his enthusiasm on their last date before he went off to Brazil there would be no reluctance on his part. She had held him at bay—shades of Gordon—and he, ever the gentlemen, had cooled his ardour. If for some reason he was slow to start the ball rolling this time round, she would take the lead! *In the arena of love these days, anything goes!* So the younger generation thought, anyway. So why shouldn't the older types join in the fun!

Driving through Woodstock Madeleine turned her thoughts back to New York. Nigel had booked her a room in the Santa Clara Plaza, the same hotel as him and his crew. When she said she would pay he said no, she wouldn't. Especially as he had managed to swing airline discount on the nominal rate. Or so he said, anyway.

A rough plan was forming. They would be departing Heathrow mid-morning on the Monday, arriving early afternoon local time. After a nap and a shower the crew would meet up in the hotel bar for pre-prandial drinks. Some BOAC captains insisted that all the members of their crew should go out together for meals and entertainment. Some even demanded equal payments from them when settling the subsequent bill, wilfully ignoring the fact that some crew members had deliberately chosen cheaper options in order to save as much of their allowances as possible for other purposes.

Nigel was not one of these captains. Once they were off duty, his crew could go wherever they

wanted with whoever they wanted. His only stipulations were that their behaviour should not bring the airline into disrepute and that they observed the abstinence from alcohol rules prior to the return duty. When it came to paying restaurant bills, Nigel's policy was to ask everyone to chip in what they thought they owed, including a tip. Only very rarely did the kitty fall short and the captain was happy to unobtrusively throw in a bit more of his own cash to preserve the genial mood and avoid embarrassment.

For their free day, Nigel had suggested that he and Madeleine and anyone else who wanted to join them could buy tickets for the country music festival scheduled at the Delacorte Theater in Central Park. Madeleine happily agreed, although she pointed out she would need some time for wandering around the Fifth Avenue shops. And the Metropolitan Museum of Art. For the second evening Nigel thought they should see if there were tickets available for a good Broadway show. He was happy for Maxwell Murdoch to join them for any or all of these diversions.

The return flight left JFK at 1910 local time on Wednesday evening and was scheduled to land at Heathrow soon after the night jet curfew finished at 0600 on the Thursday.

As Madeleine approached her house she noted a familiar car parked behind Toni's in the road outside. She turned into her driveway, searching her memory for the identity of the owner. Ford Anglia, two tone blue . . . John Davis! What a coincidence!

She let herself in and checked the silver platter in the hallway for second post. Nothing today. Her

lodger and her visitor were not in the lounge or the dining room or the kitchen. Madeleine dropped her handbag on the kitchen table and opened the door to the garden. Not there either.

She thought she heard a noise from upstairs. She went slowly up, wondering whether to call out, "Anyone at home?", before an instinct told her to keep her silence. The door to Toni's room was ajar and there was certainly some sort of activity going on in there, realised Madeleine. She pushed the door open.

John was on his back on Toni's bed, naked. Toni was astride him, also naked, groaning and grinding her pelvis on her partner's. No imagination was needed to deduce the geometry of their more intimate anatomical parts.

Madeleine's jaw dropped. "Oh . . ."

In mid thrust Toni turned towards her. "Maddie . . . hi." She grinned. "Get your kit off and join us if you want. We're having a great time."

John also turned his face towards the door and his look transformed from eyes half closed ecstasy to embarrassed surprised. "Oh . . ." he echoed.

"Sorry, Madds," continued Toni, momentarily resting herself on her lover's lower abdomen. "I didn't think you'd be home so soon."

"No . . ." said her landlady, still trying to regain her composure.

Toni looked down with a broad smile. "John, darling, you've gone all limp on me. What can I do to stiffen you up again?"

"I'll leave you to it," said Madeleine, turning away. "I'm just . . . going to the shops. I'll be back in about half an hour."

"Lovely, Madds. We'll be done by then . . . probably. Buy some cakes and we'll all have afternoon tea."

* * * * *

Normality of a sort had been restored an hour later. Toni and John were dressed and seated at the kitchen table, sharing tea and Vienna slices with Madeleine. John looked a little sheepish but Toni was chirpy.

"It's all my fault," she said. "I dragged him upstairs for a shag after he had told me he wasn't actually going out with you."

John smiled weakly. "I didn't exactly resist, did I? But what Toni says is true. None of it was planned. I was passing through and thought it would be a nice surprise to see you, if you were at home."

"I was certainly surprised," said Madeleine wryly.

"I actually wrote out a note to drop through your letterbox in case you weren't in," continued John, "suggesting meeting somewhere. Toni invited me in and we got chatting over a glass of wine. She asked me if we were together and I told her, 'no'."

"Well, no harm done," said Madeleine. "And no reason why we shouldn't meet socially . . . without any obligations."

The visitor smiled ruefully. "I suppose you think I'm a bit of a cad."

Madeleine returned the smile. "Actually, no, John. I know you're a decent sort. When Toni is out on the prowl not many men could resist."

"That's me," grinned Toni. "When the urge hits me I've got to find someone who's available to service it. Poor old John didn't stand a chance. As soon as he told me he was free I practically tore his clothes off. I was desperate for a shag."

"For what it's worth I thoroughly enjoyed it," said John. "You certainly know how to get a man going."

Toni tilted her head playfully. "Are we on for a return match?"

"Not here!" said John. "That would be disrespectful to Maddie."

"Look," said the landlady. "If you must, then you must. But perhaps wait until I'm not here."

"You could always join in. What do you think, John? Shall we give our Madeleine a good seeing to?"

"No!" said the other two together.

"Shame!"

CHAPTER 26

The sign on the door said "B.O.A.C. Crew Report" but everyone knew it as "Room 221", the room's designation before it migrated to the Central Area Oceanic Terminal from the old North Side buildings.

On this busy Monday morning in early May there were various aircrew in the room coming and going, carrying out pre-flight preparations or post-flight admin tasks or just standing around swapping gossip with chums. It had taken a few weeks for the mood in Room 221 and the rest of the airline to lighten after the incident the previous month in which a BOAC Boeing 707 had burnt to a skeleton after an emergency landing at Heathrow. An engine had caught fire just after take-off and the crew hastily brought the burning aircraft back. After landing the fire had spread uncontrollably. During the evacuation, five passengers and a stewardess, Jane Harrison, had died. Jane had stayed at her post until overwhelmed

by smoke, giving up her life trying to save her passengers.

This May morning fine weather helped to lift the spirits of the BOAC aircrew in Room 221. At one table sat Captain Nigel Nixon, First Officer Rick Mountford, First Officer Jeremy Bosworth, Senior Engineer Officer Frank Armitage and Professor Madeleine Maunsell. Nigel had introduced their supernumerary crew member to the two copilots, who listened respectfully when Frank added a little of Madeleine's history to the introduction. The flight's cabin crew occupied a nearby table and Nigel had already greeted them and checked relevant information with the Chief Steward.

As always, a considerable chunk of the pre-flight work revolved around documentation detailing expected fuel requirement, flight time, navigation, payload details and estimated take-off weight. Later on the three pilots would make their way to the Briefing Room to check winds, en route weather, destination and alternate airport weather and Notices to Airmen, "Notams" in aircrew parlance. At the same time Frank would proceed to the departure stand to do his engineering checks on the aircraft.

"So, they've given us Foxtrot Golf," said Nigel now. "It's already here on Stand forty-one, fully serviceable as far as we've been told." He tapped the sheaf of papers on the table. "We'll be on the heavy side, but the headwinds aren't too bad, minus forty to forty-five overall. At the estimated take-off weight take-off performance shouldn't be a problem if we're using two eight right." Runway 28R was the northernmost

Heathrow runway, pointing east-west in parallel with the old A4 Bath Road just outside the airport and the new M4 motorway a little further out.

Madeleine understood most of what was going on. Apart from her own aviation background she had accompanied her brother on the occasional trip in the past, both on the Britannia turboprop and latterly the Boeing jet.

"Hello, boys, what mischief are you getting up to?"

They looked up to see a middle-aged man in BOAC captain's uniform, cap at a rakish angle. The moustache on his grinning face was even more luxurious than Frank's.

"Hello, Mike," greeted Nigel. "Good trip?"

"Super. Fell in love with my 'A' girl . . . again!"

"You're incorrigible, you old rogue!"

"You're taking Fox George, aren't you?" Captain Michael Beechwood was one of many older pilots who sometimes lapsed into the pre-1956 phonetic alphabet.

"Uh-huh. You brought it in, didn't you?"

The other pilot nodded. "She's a good ship. Couple of minor snags. Nothing to stop her taking you lot to JFK if you treat her nicely." He tilted his head and smiled at Madeleine. "I don't think I've had the pleasure . . ." he began.

Again Nigel made the introductions and Mike looked at Madeleine quizzically. "I do know you," he said. "Or I know of you. Now I come to think of it, I've seen your photograph."

"She was in the papers recently, flying a Spitfire," said Nigel. "Is that what you mean?"

"No, I didn't see that. No, I'm talking about an earlier photo, when you were with the ATA. You were Terry Walker's girlfriend, weren't you?"

"We were engaged," smiled the professor.

"We were both on 139 Squadron—Mosquitos—Terry and I," explained Mike. "He didn't make it back from the Dortmund raid. I was on that raid myself."

"They told me he got shot down by a night fighter," said Madeleine.

"No, someone must have got their wires crossed. That's not what happened . . . Sorry, Nigel, I'm interrupting your briefing."

"We've got a few minutes to spare, Mike. You carry on."

The other captain pulled up a chair and sat himself down.

"It was nasty. We found the target okay but we got a real pasting from the flak guns. We were pathfinders, dropping markers for the main force. Terry was one of the first in. After he laid his markers he announced he would make a dummy attack to confuse the flak gunners. Well, actually he did it twice. Then the CO told him to break off and head for home and someone else would take his place. Terry said he'd do one more run and then bugger off. That's when they got him."

There was a respectful silence around the table.

"He was a good chap," said Mike. "One of the best. Good instructor, too. Checked me out in the Mossie. He would have asked his Nav if he agreed about going in again at Dortmund. They both got posthumous DFCs, I believe."

"Yes," said Madeleine. The Distinguished Flying Cross was awarded for *exceptional valour, courage and devotion to duty whilst flying in active operations against the enemy.*

"I'm curious," continued the professor. "Where did you see my photo?"

Mike looked at her. "Terry had a picture of you he used to take with him on missions. He'd stick you on the instrument panel by the DI with a bit of plasticene." The direction indicator was a gyroscopically stabilised instrument telling the pilot the aircraft's compass heading. "He said you would always point him in the right direction."

"I don't remember him telling me about the photo," said Madeleine.

"Anyway," continued Mike, "on the outbound leg someone asked Terry on the VHF if his Madeleine was keeping us on track. He replied that he'd forgotten to take the photo with him and they would have to rely on their navigators. So then there was a bit of banter before the CO told us off for breaking radio silence. When we got back we found the photo among his effects."

Another pause. Then Madeleine said, "They must have sent the photo to his parents. I never saw it. Thanks for telling me about it, Mike."

"And now we've got the real thing to guide us on our way," smiled Nigel, pointing at his sister.

"Nice to have met you, Madeleine," said Mike, standing up and holding out his hand. "I'll bid you all adieu." In a stage whisper he said, "Nigel doesn't like his briefings interrupted, you know. It's not SOP."

"Bugger off, you clown!" grinned Nigel. As his colleague walked off his expression turned more serious. "Okay, chaps, let's get back to business."

* * * * *

Foxtrot Golf rolled slowly along the outer taxiway towards the two eight right holding point. In the cockpit three of the four men in the crew were running through the before take-off check list. There were only two aircraft ahead of them in the departure queue so they didn't anticipate any delays. In the copilot's seat sat Jeremy Bosworth, who had been offered the leg as handling pilot by the captain. The crew's other copilot was seated at the navigator's station behind Madeleine, who herself occupied the observer's seat alongside the flight engineer. Rick Mountford had accepted the captain's request that Madeleine take the place he would have otherwise expected to be seated in himself. Of course, he wouldn't have dreamt of declining, but he appreciated being "requested" rather than "ordered". He could think of several captains who would not have bothered to consider his feelings on the matter.

Like the others, Madeleine was wearing a headset but she wasn't really paying attention to the ritual the 707's crew were going through. The photo Mike Beechwood had mentioned in Room 221 was taking her memory back to the war, to Terry, to White Waltham and to the adventures she and her friends went through, some enjoyable, some frightening, some sad, some . . . painful. And here she was,

quarter of a century later, sharing the cockpit of an airliner with Nigel and Frank, two of the White Waltham brigade. Who would have thought they would survive the war, let alone find themselves together in a large jet airliner about to whizz across the Atlantic?

The cockpit door opened and the Chief Steward came in. He waited until Nigel could spare his attention. "We're all strapped in here, Captain," he announced. Nigel smiled and gave him a thumbs up.

"What's on the lunch menu, Barry?" asked Frank. "I'm getting peckish."

"Bread and water, unless you're good boys."

"We'll be good!"

"I'll see what we can rustle up."

"I can help in the galley, if you like," said Madeleine.

"Thank you," said Barry, moving back and opening the door to leave. "When you're fed up with these adolescents, come and chat to us. There's a seat for you in First Class. See you later."

Frank Armitage, thought Madeleine now, reminiscing again. Sitting there at his panel, stroking his moustache. His claim to fame was the time he brought his Lancaster home after the pilot got hit by flak, American if she remembered correctly, a B17 driver who had converted to Lancs. Married with a couple of kids, wasn't he? She'd have to ask him about his family later on.

Nigel Nixon, her half-brother, Moths to Lancasters to Boeing 707s—quite a journey. Taught her

instrument flying to keep her out of danger. Nigel, who might have ended up as her husband if . . .

"Speedbird five nine two, advise when ready," came the voice in the headphones.

In the copilot's seat Jeremy looked across at the captain and raised a querying eyebrow. In turn Nigel turned towards the flight engineer.

"All set, Frank?"

"Aye skip, before take-off checklist complete."

Nigel nodded to Jeremy, who pressed the transmit button on his control wheel. "Affirmative, we'll be ready on reaching."

"Roger, Speedbird five nine two, after the departing Trident line up runway two eight right."

"Okay, chaps," said Nigel on the intercom. "Essential chat only until further advised, please."

Rotating the tiller wheel by his left knee, the captain turned Foxtrot Golf's nosewheel to swing the aircraft round onto the runway and then he applied the parking brake.

"Your aircraft," he said to Jeremy. "My radio."

"Speedbird five nine two, cleared take-off, wind two five zero, seven."

Nigel acknowledged the clearance, then glanced quickly at his copilot and flight engineer.

"All set, chaps?"

"Yes, sir."

"Aye, skipper." Frank glanced at Madeleine and gave her a wink.

"Okay, let's go."

"Brakes released," said Jeremy, holding the control wheel.

Nigel's right hand slowly pushed the four throttles forwards and the Conways roared in response. He lifted his hand an inch or two and Frank, leaning forward, adjusted the throttles.

"Power set, all good."

Nigel's hand dropped back to the throttles.

The jetliner gradually accelerated, Madeleine noting various call-outs from the other three over the intercom.

"Speed building both sides."

"One hundred knots."

"Vee one . . . rotate."

Jeremy pulled his control wheel steadily rearward and Foxtrot Golf lifted its nose in response. Out of her window Madeleine watched the runway drop away.

"Vee two, positive rate."

"Gear up."

Madeleine watched the pilots as they retracted the flaps and let the aircraft accelerate. Jeremy called for autopilot engagement and released the control wheel.

"Ready for the after take-off checks, Jeremy?"

"Yes, sir."

"Here they come."

"Speedbird five nine two, airborne one four, contact radar, one two three decimal seven."

With the 707 safely airborne the atmosphere in the cockpit relaxed a little and the crew released their shoulder harnesses. Frank grinned down at their supernumerary crew member.

"Five minutes gone, Maddie. Only seven hours and four minutes to go."

CHAPTER 27

"Looking after you, are they?"

Madeleine looked up to see Frank's smiling face. She had been half asleep, the magazine she was reading open on her lap. The first class cabin was only half full and the chemistry professor had been able to spread out her accoutrements on the seat next to her.

"Yes, just had a lovely lunch—smoked salmon paté and delicious canapés, washed down with a glass of bubbly."

"Yes, Lorraine sneaked in a few bits and pieces for us at the sharp end. No bubbly, sadly."

"They seem like a nice bunch, your crew."

"It'll be a good trip, Maddie. Always is when Nigel's running the show. He looks after his crews. Some captains treat the cabin crew like dirt, not to mention their copilots and engineers."

"His partner used to be a stewardess, didn't she?"

"Yes . . . Jackie Holmbeck. Lovely girl. We were shocked when she got killed."

"I suppose she would have given Nigel an insight into what life as cabin crew was like. Maybe some pilots don't think about that."

"That would be part of it, Maddie, but it's mainly a character thing. Nigel's just a nice bloke. No chance of him getting payback pie."

"What's that?"

Frank settled himself into the seat across the aisle. "May I join you for a while? . . . one of the kids is looking after the panel. Nigel likes to give us breaks away from the grindstone. Helps to keep us happy. Some captains don't bother."

"Of course, Frank. Always nice to chat with you. What's this 'payback pie'?"

"You'd think that pilots would take care not to antagonise the folk that were bringing things they eat and drink. The bleeding obvious, isn't it? If a pilot annoys the cabin crew they get their revenge by . . . modifying the food and drink they take into the cockpit."

"Modifying?"

The flight engineer listed a few of the treatments, Madeleine's look of surprise gradually turning to horror.

"Surely they wouldn't do that, Frank?"

"So I'm always courteous and considerate to the cabin crew . . ." He smiled up at the "A" girl approaching them, ". . . especially gorgeous creatures like the lovely Lorraine here."

The stewardess smiled at Madeleine. "Is he bothering you, Miss Maunsell?" She winked at Frank. "I'll ask the captain to divert to Keflavik and offload him."

"That wouldn't work, Lorraine. I'm the only bloke round here who knows how this flying machine works."

"Has he come out with the thing about pilots and engineers yet?"

Madeleine smiled. "I've heard it many times over the years—pilots break aeroplanes and engineers fix them."

Lorraine rested her hand on Frank's shoulder. "Would you two like a cup of our superb first class coffee? I'm just refilling the perc."

As the stewardess returned to the forward galley Frank leaned towards Madeleine. "So you enjoyed strapping a Spitfire to your backside again?"

"It was wonderful, Frank. Complete surprise, fixed up by Nigel and the ATA girls. Took me back twenty years plus. Pure nostalgia."

"White Waltham. They were good times, weren't they, mostly."

"Mostly, yes."

They swapped war stories for a few minutes, sipping the fresh coffee Lorraine had brought them and then compared more recent history.

"You've got two boys, haven't you?" asked Madeleine.

"Yep, teenagers now. Absolute terrors."

"Are they following their Dad into aviation?"

"My eldest wants to be a racing driver and his brother a deep sea diver . . . wants to make films about marine wild life. I've no idea where that notion came from."

"What are you doing when we get to New York?" asked Madeleine. "Are you coming to the concert in Central Park?"

"Yeah, reckon so. I think most of us are, though Barry, the Chief, is off to see some relatives somewhere in New Jersey, I think. You want to hit the shops, didn't Nigel say?"

"Yes, and maybe the art museum. Have you seen it?"

"Uh-huh. Though as a bit of a philistine that sort of stuff isn't really my thing. Is Nigel going to the museum with you?"

The professor shook her head. "No. He said he's got a lot of paperwork to do. He's got a meeting with our solicitor on Friday morning to go over his Mum's will and other documents. He reckons when we get back on Thursday he'll spend most of the day sleeping so he wants to do the paperwork over the next couple of days."

The flight engineer nodded. "And you're meeting this mad American bloke, aren't you?"

"Yes. And he's taking us to Broadway to see 'This Time With Feeling', picking up on Nigel's idea. Max has sorted out the tickets apparently. Is all the crew going, do you know?"

"I think so, apart from Barry."

"Sounds like fun."

"I read about this Max bloke in the paper. Something to do with blowing up Hanoi with a nuke."

Madeleine supplied the developments that she knew of. It seemed that the warring factions in the Righteous Warriors had come to some sort of truce. A statement had been issued explaining that the whole fracas was actually the result of a misunderstanding. The Hanoi plot had originated as a joke but some people had taken it seriously.

"Actually, the settlement was purely a device for avoiding law suits," confided Madeleine to Frank now. "Max told me the Hanoi thing was genuine but no one wanted an expensive court case so the deal was struck. The only fly in the ointment is that the other lot want him to stand down from the steering committee and he's refusing. Watch this space!"

"He sounds a bit of an oddball to me. God-botherer, isn't he?"

"Yes, his evangelism is a bit flamboyant but I think he's basically a decent man. He's still funding our research work in Oxford even though he won't get much benefit from it himself."

The flight engineer frowned. "What is it you do? Filtering carbon dioxide out of the air, isn't it?"

"Don't be scornful, Frank. One day Planet Earth might need to make use of our work."

"Nigel told me you told him it would take a hundred years to get to the danger level."

"At present rates of emission that's true. But if nations such as China and India start to industrialise it'll happen more quickly."

"What happens if we get to that level?"

"It adds extra enthalpy to the atmosphere."

"What's that?"

"Heat energy. If the atmosphere gets hotter it can hold more water vapour. So more water evaporates from the sea, which means we'd get more precipitation."

"More rain, then."

"Yes, in many areas, but less in others. According to some climate scientists we'd get more extreme weather events generally. Violent storms, floods, droughts, more hurricanes."

Frank nodded. "You're a lone voice, aren't you, Maddie?"

"So was Churchill when he warned us about the Nazis."

"Fair point."

The professor looked earnestly at her friend. "This aircraft uses paraffin for fuel, doesn't it?"

"Er . . . we call it jet fuel. To the Yanks it's kerosene."

Madeleine nodded. "How much will we consume today?"

Frank frowned again. "What was the expected burn? Just over 35 tons, as I recall. I'd need to check my log."

"Right. There are around twelve carbon atoms in each molecule of kerosene. So when you burn it you produce twelve molecules of CO₂ for every molecule of fuel."

"Sounds a lot."

"It is. When you take the atomic weights of carbon and hydrogen and oxygen and do the maths you find

a three-to-one ratio. So the 35 tons of fuel we burn today will release more than 100 tons of CO₂ into the atmosphere."

"Wow! Dirty buggers, aren't we?"

"Yes. And at some point in the future it'll have to be dealt with."

"Perhaps the world will run out of oil and coal before then. So there'll be other sources of energy."

Madeleine nodded. "That's what everyone's assuming." She sighed. "Which is why they think I'm wasting my time." She paused. "Maybe they're right," she added quietly.

Frank looked at her. "You're doing other things, though, aren't you, Madds?"

"Yes. There's plenty of other work to keep me occupied." The professor smiled ruefully. "To be honest, Frank, I'm getting a bit tired of the methane reformation project myself. It's like I'm banging my head against a brick wall. Dreadful thing for a researcher to admit . . . almost heresy!"

"Do you ever wish you'd stuck with flying after the ATA?"

"It was difficult, Frank. I loved flying but I loved chemistry too. Plus there were plenty of unemployed pilots of both sexes looking for work. I think I made the right choice."

The flight engineer looked at his watch. "I'd better be getting back soon. Mustn't abuse Nigel's consideration."

"I've enjoyed our chat. Especially reminiscing about the old days."

"Perhaps I can meet your ATA friends one day."

"I'm sure they'd love to meet you again, Frank."

"And you must come to us for dinner soon."

"I'd like that."

"With a partner?"

The professor tilted her head. "You never know."

The flight engineer stroked his moustache. "Did talking about Terry make you sad earlier?"

"A bit. But it's many years ago now."

"Considering how many people we lost the morale held up pretty well at Waltham, didn't it?"

"I'd say so."

"You had a bad spell, as I recall."

It was the professor's turn to frown. "When was that?"

"It was the time you and Nigel were doing night circuits or something."

Madeleine paused, as if undecided how to answer.

Frank filled the silence. "We were expecting both of you to join us for a few bevvies in the bar after the detail but you never showed. And you were both grumpy for several days afterwards. We never found out the reason."

"It was after Terry was killed," said Madeleine slowly. "Nigel said I should be grounded in case my emotions affected my flying."

"And I take it you did not agree."

"I did not. I told him it was not his place to make that judgement. So then he suggested I see the medicos. The discussion got quite heated."

"You should have come to the bar," laughed Frank. "We'd have plied you with booze until you made up."

The professor fixed the flight engineer with her gaze. "I hit him, Frank. I slapped his face. He swore at me and stormed off. Sadly you and the other Waltham people got caught in the aftermath."

"It was so out of character . . . for both of you. We all wondered what had happened."

"Well, now you know."

CHAPTER 28

On some stopovers the captain's accommodation was identical to the rest of the crew. By contrast in one or two Middle Eastern hotels a captain could expect an entire luxurious apartment to rattle around in by himself. In the New York Santa Clara Plaza the captains were allocated Executive Suites, larger than the standard rooms and with more amenities, including a lounge separate from the bedroom and bathroom.

In the lounge in Executive Suite 832 BOAC Captain Nigel Nixon was dispensing ice cubes. Around him sat Senior Engineer Officer Frank Armitage, stewardess Lorraine Compton and chemistry professor Madeleine Maunsell. The night caps which had just been delivered by room service were Scotch for the men, cointreau for Lorraine and a Cinzano with lemonade for Madeleine. Nigel put the ice bucket back on the table and then sank into the tan leather sofa.

The captain raised his glass. "Cheers, everyone."

The others followed suit. "Bloody good evening," said Frank. "Thanks for organising it, Nigel."

"Well Maddie and Max Murdoch had a hand in that." Nigel raised his glass again. "I salute them."

"Not to mention the gig at the Delacorte," continued Frank. "Even the youngsters appreciated the country music stuff."

"Or pretended to," said Nigel. "I'm sure I overheard Jeremy saying something like 'rock'n'roll it ain't'."

Their second evening in New York had gone pretty well according to plan. Apart from Chief Steward Barry Linton, who was staying with relatives in Asbury Park, New Jersey, the entire crew had eaten at a Manhattan steakhouse prior to strolling to the Maison Royale Theater on Broadway to see the musical, "This Time With Feeling". Waiting to meet them there was Maxwell Murdoch, who Madeleine introduced to the others. When asked about how he had managed to book two blocks of seats close together in a packed house at short notice, the entrepreneur had smiled and mentioned that the theatre's General Manager was a friend.

After the show the younger members of the crew took themselves off to a night club in Greenwich, except for Lorraine, whose stated intention was a night cap and then bed. To remind the others of the requirement not to blot the airline's escutcheon Nigel resorted to light-hearted irony, telling them to get paralytically drunk and make sure they reported for work the next day nursing monumental hangovers.

Max Murdoch had also taken his leave, telling the others that he was meeting friends but adding that he was looking forward to seeing them again at JFK the following evening for the flight to England.

"This must be a bit boring for you, Maddie," said Frank after he and the others had been swapping airline stories over their drinks.

"Not at all," said the professor, hoping she sounded sincere.

"Ah . . . knew there was something I'd forgotten to tell you," continued the flight engineer. "I met a fan of yours a few months back."

"A fan?"

"American chap. Stan Hazzard."

Madeleine shook her head. "Doesn't ring any bells."

"B17 driver. I was his engineer when he converted onto Lancs."

"Ah, yes, I vaguely remember. Wasn't it his aircraft you brought back and landed after he got wounded?"

"Yep. That was him."

Lorraine's eyes widened. "You landed a Lancaster?"

"Yep. It didn't survive my arrival though. They had to turn it into saucepans after I wrecked it."

"Frank's too modest to tell you that it had been badly shot up," said Nigel. "He did a brilliant job and got a DFC for it."

"Anyway," said Frank, "Stan told me he asked you for a date when you brought a new Lanc to Wyton." He grinned at the others. "The ice maiden here turned him down."

"I don't remember that," said Madeleine.

"To be fair, you might have been engaged to Terry at the time."

"Ah . . ."

"Right," announced Lorraine, "I'm going to hit the sack. I'll probably see you lot at brekkies."

"Sleep well, Lorraine."

Frank left shortly afterwards, expressing his intention to drag his battered old frame to the dining room for breakfast if he woke up in time.

Madeleine drained off her glass. "I think I'm ready for bed, too. Thanks for a lovely day, Nigel."

"My pleasure."

"A good bunch you've got with you. They all seem to like you."

"I bribed them. Didn't want you thinking your brother was a pompous martinet of a captain."

"I knew it all along!"

"It's great working with Frankie."

"Yes, we had a long chat on the flight over." Madeleine put her glass down and lowered her eyes. "He asked about the big bust up we had at Waltham."

The captain looked at her. "What did you tell him?"

"I had to think up an answer pronto. I told him you wanted to ground me after Terry got killed. Then we argued about it and I hit you."

"Did he accept it?"

"I think so."

"Well, I hope he doesn't bother to look into it in more detail. He'd realise what you told him wasn't true."

Madeleine sighed. "You're right, of course. The . . . incident . . . happened before Terry and I started

going out. When Frank questioned me I couldn't think of another explanation on the spur of the moment."

"Our log books would confirm the dates if anyone looked at them."

"Well, let's hope Frank doesn't bother about it any more," said Madeleine. "There's no reason why he should—it was a trivial episode in his life."

"It was a major one in mine."

"And mine."

The two of them held each other's eyes.

"I think we were wrong to chastise ourselves for what happened at Waltham," said Madeleine quietly.

"I've often thought that myself. I shouldn't have been beastly to you when I knew it was partly my fault—"

"I was mortified," interrupted Madeleine. "For me the anger I showed to you was really against myself for what we'd done."

"Do you still regret it, Maddie?"

"No . . . I don't think so. It was forces beyond our control."

Nigel began swirling an ice cube in his whisky glass while Madeleine toyed with her necklace.

"I loved you then," began Nigel, still looking down, "and I love you now . . . not brotherly love but . . ."

Madeleine rose from her chair and sat herself next to her brother. She took his hand in her own.

"I've always loved you the same way, dear Nigel," she murmured. "Even when I was engaged to Terry it was you who held my heart. I loved you when we were teenagers and when you got married and when

you started going out with Jackie. I'll always love you. I can't help it."

Nigel put his hands on his sister's shoulders.

"This is how it started that night at Waltham."

"Yes."

"Do you want to—"

"Yes."

The first kiss was tentative but the exploration soon intensified, their pulses quickening. Then their mouths separated as they paused for breath. Nigel released his embrace and his hands strayed to the front of Madeleine's blouse. Slowly he undid the top button and then the one below, then another. Inside Madeleine's bra he could see her breasts rising and falling with her rapid breathing. With yearning eyes Nigel looked up for reassurance.

Madeleine nodded.

"Are you sure?" he whispered.

"I'm sure. I've wanted to do this ever since Waltham . . . ever since Sywell. We'll share your bed here . . . tonight . . . and we'll make love. But it will never happen again."

"I love you, Maddie."

"Then show it."

CHAPTER 29

All five occupants of the cockpit were entranced, staring out the 707's windows. To their left and ahead and above them the iridescent curtains of the Northern Lights shimmered and swirled in the night sky, which was black except for a faint glow of twilight marking the northwestern horizon. The pilots had turned the cockpit lights down to minimum to accentuate the fantastic display outside. There were no lights below to distract them. The jetliner was cruising northeastwards across Labrador and any signs of human habitation were obscured by a thick blanket of cloud.

"Shall we ding the cabin crew, sir?" said First Officer Rick Mountford in the copilot's seat. "I'm sure they'd enjoy the view."

"Good idea," replied the captain, reaching up to the overhead panel to press the button labelled "Cabin Call".

"Max might like to see it as well," said Madeleine, sitting in the observer's seat, leaning back a little so that the view of First Officer Jeremy Bosworth crouching beside her was unobstructed.

"The more the merrier," commented Frank, peering ahead from the flight engineer's station.

"Yes, but not all at once," suggested Nigel, picking up the interphone handset from the central console.

"Yes, Barry," the others heard him say. "Nice fireworks outside. Want to take a look? . . . yes . . . yes, but two at a time, eh? . . . no . . . and ask Max if he wants to see them as well . . . ta very much."

In the end the captain followed the Chief Steward's suggestion that they extend the invitation to view the Northern Lights from Foxtrot India's cockpit to any first class passenger who might be interested. During the entertainment the coast of Labrador passed unseen below them, announced by Jeremy at the navigator's station. Underneath the cloud would be the pitch darkness of the Atlantic Ocean. The last visitor was Maxwell Murdoch.

"Ain't that somethin'," he breathed. "I seen plenty of sights in my time but this sure beats most of 'em."

"It's beginning to fade now," said Nigel. "We often get a good show in this area at this time."

"And they pay you guys for this!" laughed Max. "You should be paying them!"

"Don't suggest it," said Frank dryly. "They're always looking for excuses to avoid pay rises." The flight engineer had already lost interest and was reading a copy of the *Washington Post*, his spotlight a harsh contrast to the surrounding gloom.

"Say, how do you guys know where you're headed?" asked the American.

"We're using Loran," came a voice from behind. Jeremy was again seated at the navigator's table. As Max turned round the copilot pointed to the glowing cathode ray tube.

"Is that an electronic map?" asked Max.

"No . . . its based on hyperbolic position lines generated by radio beacons. Two position lines will give us a fix but we usually go for three for greater accuracy and confirmation."

"So you don't need to follow the stars, then?" chuckled Max.

"We do astro if we need to, if the Loran isn't good. Sun, moon and stars."

In the dim light Jeremy could see the American raise his eyebrows. "Really? I said that as a joke."

"We've got Consol, too," joined in Frank. "It's actually a modded version of what the Germans were using during the war to navigate their U-boats."

"You don't say! How about that!"

After a few more minutes of aeronautical chat Max thanked his hosts and said he'd head back to the cabin.

"I'll come back with you," said Madeleine. "I think the boys need some woman-free space for a while."

"That's right," chuckled Frank. "I've got a couple of new jokes the boys might like to hear. Not suitable for a lady's ears."

"Why does that not surprise me?" commented the professor wryly.

In the cabin the conversation between Madeleine and Max ranged over topics many and varied. The Righteous Warriors storm appeared to have abated, with Max issuing a public statement apologising for impugning the honesty and integrity of General Hartmann and Louis Maguire. In turn they had withdrawn their demand that their accuser resign from the steering committee. The Warriors public relations department had added their own bulletin saying that they were grateful that prayers to the Lord for a resolution had been answered.

"It stinks," said Max now. "It sticks in the craw that I've had to say sorry to those lying bastards but . . . the greatest good for the greatest number and so on. Lots of our members were upset by what was happening. It was suggested that the quarrel was the work of the devil and he needed to be vanquished."

"Is that your opinion?"

The American grimaced. "I've done a lot of thinking about it, Maddie. I haven't lost my faith but I reckon there's plenty of people in the Warriors that don't exactly follow the guidelines Jesus Christ set down. I may resign . . . I don't know. Crazy, isn't it? Here I am going to London to promote the cause and I can't even convince myself."

"I lost my faith many years ago. I couldn't stop wondering why an omnipotent God would ignore human misery."

"That's a tough one," admitted Max. "And I can't answer when people ask me who created God."

"Perhaps Jesus was just advocating a form of socialism. You know . . . the fortunate helping the less fortunate."

"I'm not comfortable with that word, Maddie."

The professor smiled. "Okay, Max. He was a good man trying to persuade others to be good people."

"I like that better."

"But perhaps he wasn't divine. Perhaps he was deluding himself when he claimed to be the Son of God."

"Well, we'll have to part company on that one."

"Okay."

"But you're a member of the Church of England, aren't you?"

"Notionally yes, but only because I sing in a church choir."

"So who inspired all those composers of religious music and hymns if it wasn't God?"

"I can't answer that, Max."

The American smiled. "So, moving on to lighter things, did you have a good time in New York?"

"Loved it, Max. All the crew did."

"I thought the Broadway show was great."

"That was the best evening for me."

"Your brother is a great guy. You could see all the crew like him."

"Half-brother."

"Yeah."

Chief Steward Barry Linton appeared from the galley and moved slowly down the cabin, advising each row of passengers that he would soon be

dimming the lights and would anyone like a nightcap beforehand.

"Cinzano and lemonade, please," smiled Madeleine when it was her turn.

"Scotch on the rocks for me, Barry," said Max.

"Certainly, sir."

"Max."

"Certainly, Max."

* * * * *

The chime interrupted the tranquil inactivity in the cockpit, stirring Jeremy in the observer seat from his doze. Frank looked up from the newspaper crossword at the blue light in the overhead panel labelled "HF2".

"It's Box 2," said Rick, referring to the high frequency communications radio. "Not Oceanic . . . it's Ops."

"I wonder what they want?" asked Nigel, also looking up.

"We didn't leave anyone behind, did we?" joked Frank.

The captain smiled. "You need new material, Frankie."

"Shall I take it, sir?" asked Rick, reaching for his headset.

"Yes, please. Let's put the speaker on so the rest of us can listen headsets off."

Rick donned his headset and pressed his transmit button.

"Speedbird London, Foxtrot India answering Selcal."

Through the crackle of static came the reply. *"Fox India, we've had a Telex from Ops New York. Advise when ready to copy, over."*

Frank pulled a notebook towards him. He nodded to the copilot.

"Go ahead," transmitted Rick.

"Okay, Fox India. We don't know how authentic this message is. We got it a few minutes ago, over."

"Go ahead," repeated Rick.

"Okay. Message reads 'Strong possibility repeat strong possibility an explosive device has been placed in the hold baggage of passenger Maxwell Murdoch on flight BA565 operating JFK to LHR. Source currently unverified. Advise captain's intentions', over."

The three crew members looked at their captain. Jeremy's langour had vanished. Like the others he was alert, expectant.

"Tell them to stand by," said Nigel. "We'll get back to them ASAP."

"Roger," came the reply, *"we'll maintain listening watch. Out."*

"Where's the nearest diversion, Jeremy?" asked Nigel, twisting round in his seat. "We could head back to Goose, maybe. Weather was crap, though, wasn't it, when we overflew it?"

The copilot began to move to the nav station. "I got a good Loran fix about ten minutes ago, sir. I'll work out a DR fix. Two minutes."

"The Goose forecast was bad, wasn't it," said Rick. "Cloud on the deck, heavy precip and gale force winds."

Nigel drummed his fingers on the glareshield. "Okay . . . what do you think, fellahs? Is it a hoax?"

"Max has got enemies, hasn't he?" said Frank. "Powerful enemies in that religious organisation he belongs to. He's not a random passenger. To me that means the chances it's real are higher."

"Could still be a hoax, though," said Nigel. "Someone just stirring up trouble . . . any thoughts, Jeremy . . . Rick?"

"Diversion would be tricky if we can't make it back to Goose," said Jeremy.

"Which is the greater risk," said Rick, "diverting into crap weather or taking a chance on the threat being a hoax?"

"Okay," said Nigel. "Let's get some updated weather reports if we can . . . Goose, Gander, Saint John's, Sondrestrom, Narsarsuaq, Keflavik. Will you start on that, Rick?"

"Okay, sir, I'll see what Gander Volmet's offering. I'll need to use Box 2 for that."

"No problem," said the captain. "We don't need to talk to Ops until we've got a plan. But if it takes too long to cycle through the Volmet sequence we'll ask Oceanic."

Rick reached up to change frequency on the HF radio to the weather broadcast station.

Frank leant forward. "Narsarsuaq, skip? Short runway, poor approach aids . . ."

"I know," said Nigel. "But if we're desperate and that's the closest, that's where we'll go."

"Can't argue with that, skipper. If we divert, we'll have to think about dumping fuel to get the weight down for landing."

"Yeah."

"And once we've dumped it we'll have fewer options if things don't work out."

"I know."

Jeremy had untaped the plotting chart from the nav table and now he brought it forward to show the captain. Nigel switched on the overhead floodlight and all four screwed up their eyes at the unaccustomed blaze of light reflecting from the chart.

"We're here, sir," said Jeremy, pointing to a small triangle he had drawn off the southern tip of Greenland. "As of two minutes ago. Accuracy within ten miles, I'd say. Ties in with a bearing from the Prins Christian NDB." The Non-directional Beacon broadcast its signals from Cape Farewell.

"What ranges are we talking about for diversion?" asked the captain.

The copilot read from a list he had compiled. In the right front seat Rick was writing weather reports, both his ears covered by the headset to cut out the chat from the others.

"Narsarsuaq . . . 130," began Jeremy, ". . . Sondrestrom . . . 460, but that's direct from here—shooting the approach would add a few miles. Er . . . Goose . . . 580, but we'd be bucking an eighty knot headwind."

"I was thinking the same," said Nigel. "Ops gave us this northern track to ride the westerly jetstream. Plus the weather isn't looking too pretty there."

"Gander's further, of course," continued Jeremy, "and we'd have the headwind problem."

"What about Keflavik?" asked the captain. "We'd have this eighty knot tail if we went there."

"720 miles, sir."

"Sondrestrom would be still air from here, would it?"

"Slight tail, I would say, ten knots maybe."

Rick took his headset off and handed over the paper on which he had been scrawling meteorological data.

"Latest actual and forecast for Goose, Sondrestrom, Narsarsuaq and Keflavik," he announced. "Goose is crap. The others aren't brilliant but they're workable. Narsarsuaq is just on limits but the forecast is not so good."

"Just remind me, boys, what approach aids have Sondrestrom got apart from their NDB? It's a USAF base isn't it? They'll have Tacan, won't they?"

"Yes, sir, and PAR, and according to our brief they've got a VHF frequency we can use. The military use UHF for their own comms." The Tactical Air Navigation system would give distance information and the Precision Approach Radar would guide them to the runway.

There was silence for a minute or so as the Boeing put another ten miles behind, the tension mounting as the copilots and flight engineer waited for a decision. "Bugger!" muttered the captain at one point, bringing wry smiles from the others.

CHAPTER 30

"Right," said Nigel finally, "it's Sondrestrom, then. Jeremy—"

"Turn left onto zero zero five initially, sir," said the copilot, anticipating the captain's question. "I'll give you a more precise heading in a minute when I've plotted the track. I'll steer us towards the initial approach fix to start with and hopefully Sondrestrom Radar will pick us up as we get closer."

Nigel turned the heading bug on his instrument panel and the 707 dipped its left wing in response.

"That's allowing for variation, is it, Jeremy?"

"Of course, sir!"

"Sorry, a bit rude of me to doubt your nav—you're probably better at it than me."

"It's about twenty-eight degrees in this area but it'll increase a bit as we get further north."

The captain turned to Rick. "Get a clearance from Gander, would you. Tell them we're diverting for operational reasons. We won't mention the supposed

bomb—ATC exchanges get picked up by ham radio operators and passed to the newspapers."

"Okay, sir. If we have to change level because of other traffic, what shall I ask for?"

The captain turned in his seat. "Frank . . . what's the cabin altitude?"

"Seven point three." Although the 707 was cruising at 33,000 feet the pressurisation was maintaining the passenger cabin and baggage holds at an altitude of seven thousand three hundred.

"If we go up—"

"I know what you're thinking, Nige. The cabin alt would also go up a bit and if the bomb had a barometric trigger . . ."

"So down would be better."

"I think so."

"But not too low—we'll lose true airspeed." The captain addressed Rick. "If we can't stay at three three ask 'em for twenty-nine."

The copilot donned his headset again and began transmitting to Gander Oceanic, who controlled the airspace over the western half of the Atlantic.

"How about I keep the cabin at this altitude?" suggested the flight engineer. "The diff would decrease as we descend and if the bomb went off it would do less damage. When we got below seven thou on the descent I could completely depressurise the cabin so the diff is zero."

"Yeah, let's do that. Rick, tell Gander we want twenty-nine. That way we'll reduce the diff without losing too much TAS."

"Okay, sir. Are we definitely elbowing Narsarsuaq?"

"Too dodgy," said the captain. "Marginal weather according to the last report, NDB approach, no radar, short runway."

"We could make an approach to Narsarsuaq and if we couldn't get in then divert to Sondrestrom."

"It would add to the overall flight time, Rick. If the thing is on a timer . . ."

"Good point."

"Talking of which, let's put a bit more coal on the fire. Forget fuel economy—we've got more than we need anyway." Nigel pushed the four throttles forward. "We'll go for point eight five, Frank. That'll save a few minutes." On the instrument panel the gauges confirmed that the Conways were winding up to achieve the new cruise Mach number—eighty-five percent of the speed of sound.

"Fuel checks, Skip?"

"Not necessary. We'll be dumping some later anyway."

"Okay." Frank leant forward to fine tune the throttle settings.

The captain scowled. "If this is a hoax, I'll be bloody angry!"

"I'll be bloody angry if it isn't," muttered the flight engineer.

"Here's the clearance, sir," said Rick.

"On the speaker, please."

"Speedbird five six five, Gander clears you direct Sierra Foxtrot, flight level two nine zero. Advise when level two nine zero."

Rick repeated the clearance to Gander to confirm he had received it correctly as Nigel switched the

autopilot to speed lock and brought the throttles back a little to start a gentle descent. The flight engineer turned to his panel and adjusted the pressurisation controls to maintain the cabin altitude.

A few minutes later the 707 was level at 29,000 feet, the four Conways set to hold the Mach 0.85 cruise.

"Next job," said the captain to Rick. "Ask Gander if there's an HF frequency for Sondrestrom so we can talk to them directly."

"I did that, sir. Nothing doing. We'll have to wait until we're in VHF range. I've already asked Gander to notify them we're inbound."

"Good man. And when you've got a mo, call Ops and tell them what's going on."

Jeremy appeared alongside Frank. "Come right three, sir, zero zero eight. That'll take us direct to the Sierra Foxtrot beacon."

"Thank you. Let's get the approach plates out for Sondrestrom and give ourselves a thorough briefing. We'll call up Barry and tell him what the picture is."

"Is it worth talking to Max, Skipper?" suggested Frank. "He might have useful information. He strikes me as a cool character—I don't think he'd panic if we told him what we've been told."

"Yes—good idea. Let's bring Maddie up here too. Her knowledge of gas chemistry might be useful if there's an explosion."

* * * * *

It was quite crowded in the cockpit. Nigel and Rick occupied the two pilot seats, with Madeleine at the flight engineer's station. Max sat in the observer's seat with Frank standing between him and Madeleine. Behind them Jeremy was at the nav station, seated but leaning forward to join the discussion group.

"So you guys are saying there might be a bomb in my luggage?" asked the American incredulously.

"The message mentioned you by name but the source was unverified."

"Jesus! Can we land somewhere quick in case it goes off?"

"We're headed towards Sondrestrom right now," said Nigel, "landing in about . . . Jeremy?"

"At our current groundspeed, around forty-four minutes from now."

"Shit!" muttered Max, "is there nowhere closer?"

"We're over Greenland," said Rick. "We're flying at max speed. There aren't any other options."

"Shit!" said Max again. "Hey, the flight attendants didn't say anything about this to us."

"We don't want to alarm the passengers," explained the captain. "Most of them are asleep now. Barry—the Chief Steward—will do a PA when we start our descent. He'll say we're landing at Sondrestrom for operational reasons and the passengers will get more info after we land."

Frank looked down at the American. "Is there any way your bags could have been interfered with since they were packed?"

"Let me think," said Max. "My wife packed my suitcase back in Wilmington—only one case as I'm

only away for six nights total. She knows what clothes and other stuff I need. I packed it myself this morning in the hotel."

"And was it out of your sight at any time?"

"A bell hop took it down to Reception."

"How long was it out of your sight?"

"A few minutes, I guess. When I got down to Reception it was in the lobby."

"And it was definitely the same bag as you packed?"

"Yes . . . well, I think so. It looked the same. I didn't examine it closely."

"And after checking out you caught a taxi to the airport?"

"Yes."

"And the bell hop took your case to the taxi?"

"Yes."

The captain sighed. "Personally, I think this is a hoax, but we're not taking any chances. We'll land ASAP at Sondrestrom, deplane the passengers and have the baggage checked before we go anywhere else."

"So how long will we be in the Sonder . . . whatever you call it? I need to get to London pronto."

"Sondrestrom. Difficult to say, Max. Obviously we'll do all we can to minimise inconvenience to you and the other passengers."

Jeremy looked up from his plotting chart and leant forward. "Heading change, sir. Come left four degrees, new heading zero zero four."

"Okay, thanks." The captain adjusted the autopilot and twisted in his seat to address the American.

"Thanks for your cooperation on this, Max. You can go back to the cabin now. If you think of anything else that might be useful, tell Barry."

"You got it. Say . . . good luck!"

When Max had left the cockpit Frank slipped into the observer seat so that it would be easier for the captain to talk to Madeleine without having to turn round.

"So," began Nigel, "the question is . . . if there's a bomb in a suitcase, what damage would it do if it went off? Any thoughts, Maddie?"

The professor frowned. "There would be many variables. What type of explosive? How much explosive? How fast does the flame front travel? What material is the case made of? Would the explosion be attenuated if the case was surrounded by other bags?" She smiled grimly. "A shame Bill Syerman isn't here."

"Who's he?"

"Safety Officer in our labs. Used to be in bomb disposal in the Army."

"He couldn't help us here, though. We've got no access to the baggage holds."

"Can you reduce the differential pressure in the cabin? That would help to prevent catastrophic structural failure."

"Rock and a hard place, Maddie," said Frank, running through the conflicting technical aspects of the problem.

"Would you prefer me to stay here or go back to my seat?"

"What would you prefer?" countered the captain.

The professor reached forward and squeezed the four-stripe epaulette on her brother's shoulder. "I would prefer to be here with you."

Rick turned round and managed a half smile. "Best looking flight engineer I've ever flown with."

"Are you saying I'm ugly?" said Frank, matching the forced levity.

"Right, boys and girls," said Nigel. "Back to the serious stuff. Frank, will you go back to the panel now? We'll talk about fuel dumping procedure."

"Speedbird five six five," came over the speaker. *"When able, contact Sondrestrom Radar one two four decimal seven. They have your details."*

Rick acknowledged the instruction and called Sondrestrom on the VHF frequency but as they were not yet within reception range there was no response.

The crew ran through the approach briefing. The runway pointed northeast, situated at the end of Kangerlussuaq fjord. The area radar controller would direct them towards the approach and then hand them over to the precision controller, who would guide them all the way to the runway. If for some reason radar was not available there was a localiser beam approach with a Tacan distance measuring beacon to give them ranges. Not so easy as the pilots would have to compute their own glideslope. Worst case scenario—a non-directional beacon approach using a stopwatch for distance calculation, which would not be suitable if the weather was poor. The main factor concentrating their minds was the surrounding terrain. The lower they descended in the pitch blackness the more precise the navigation demanded.

A Selcal chime on the Ops HF frequency interrupted the briefing. The four crew men and their female guest were all now wearing headsets so they all heard the message concerning facilities at Sondrestrom. They learned that the military barracks could accommodate two hundred and sixty persons, roughly double Foxtrot India's one hundred and thirty-eight passenger load. Currently forty-seven rooms were occupied by USAF personnel so there was plenty of space for the passengers and crew of the 707. Some rooms had only beds and communal toilets and showers, others—intended for officers—were equipped with en suite facilities. The commissary department was supposedly well stocked although most provisions were processed rather than fresh food.

"Bravo Alpha five sixty-five this is Sondrestrom Radar," came an American voice in their earphones. *"Are you on frequency?"*

Having endured several minutes of silence and inactivity, with the crew wondering whether their lives and those of their passengers were about to be violently terminated in the exploding fuselage of their Boeing 707, the call from a safe haven lifted their spirits.

"Affirmative, Sondrestrom," responded Rick. Over the intercom he asked, "shall we use the BA callsign, sir, or ask them to use 'Speedbird'?"

"BA's fine," said Nigel. "Don't want to confuse them."

"Bravo Alpha five sixty-five, I copy you reading me, turn left one five degrees for radar identification."

The captain twisted his heading bug as Rick read back the instruction to the radar controller.

"Wouldn't have thought there'd be much traffic round here in the middle of the night," noted Frank dryly. "Identification indeed! Who can he muddle us up with?"

"SOPs, Frank!"

"Bravo Alpha five sixty-five, you're identified one thirty-five miles south south east, stand by for vectors, advise ready for descent. Are you requesting a Precision Approach Radar approach?"

Rick confirmed their requirement for a PAR and asked for the latest weather.

"Five sixty-five, copy latest Sondrestrom weather. Wind three zero zero one two knots, visibility one quarter, blowing snow, cloud scattered below one hundred, overcast two hundred, temperature two eight, dew point two eight, altimeter two nine six five. Runway swept, cleared width one hundred feet, braking action unknown."

"Yuk!" exclaimed the captain. "Quarter of a mile vis. That'll be statute miles of course, four forty yards. That's worse than the forecast."

"We'll be okay with a PAR, skip," offered Frank.

"Scattered cloud blow minima," said Rick. "That's not brilliant." The lowest height permitted on the approach without adequate visual reference for landing according to the BOAC Operations Manual was two hundred feet for a PAR approach.

"Let's just hope the cloud's in the right place," muttered Nigel.

"Tailwind as well. That won't help," said Rick. "The runway's not overly long. If it's slippery . . ."

"We should have got Max to pray for good weather," said Frank. "He's supposed to have a direct line, isn't he?"

There was no response to the flight engineer's comment and Foxtrot India put another few miles of Arctic air behind it. Then Jeremy reached forward offering a piece of paper.

"Here's the DME table, sir," he said, "in case the PAR becomes unavailable." The copilot had calculated the correct check heights for the final approach, based on their range from the Tacan distance measuring beacon.

"Good work, Jeremy," acknowledged the captain, taking the paper from him. As if to confirm the copilot's initiative the DME readout sprang into life on the instrument panel.

"Right chaps, only essential chat from now on. Frank, start the fuel dump checklist. Rick, request descent at DME ninety."

"Bravo Alpha five sixty-five, we're aware of your . . . ah . . . security situation. After landing we require you to stop on the runway and shut down your engines without delay. There will be fire trucks illuminating all four exits and we will position standard KC135 stairs at all exits. Alternatively, you can deploy your escape slides and overwing exits if necessary. Advise please."

"If we use the slides there'll be injuries, skip," said Frank.

"I agree," said the captain. "It'll only take a little longer to deplane using stairs." They knew that "KC135" was the USAF designation for the military Boeing 707s.

Rick transmitted their intentions and asked for descent.

"Roger, Bravo Alpha five sixty-five, cleared altitude one seven thousand, advise approaching for further."

"Descent checklist, complete, Frank?"

"Yes, skip, still dumping though. I'll advise when we're done."

"Okay," said Nigel, "Down we go." He switched the autopilot to speed lock and slowly brought the four throttles fully back. Foxtrot India lowered its nose in compliance and the Conways quietened to idle thrust.

Another check on the weather brought the terse response, *"No change."* A position notification by the controller tallied closely with the crew's own assessment. The descent was uncomplicated, almost routine, with only the putative explosive device and the grim airport weather to trouble their minds. Frank announced fuel dumping complete, all dump valves shut and cabin depressurised.

"Five sixty-five, position one five miles southwest, maintain heading three six zero, maintain altitude three thousand, contact Precision one one nine decimal nine. If no contact come back to me."

Precision picked them up, turned them on to final approach and told them to initiate descent at the rate to maintain the correct approach angle. Nigel, flying manually now, called for undercarriage down and the landing checklist. Outside there was nothing to see as

the 707 sank into the blackness, bouncing in the turbulence.

"Five sixty-five, you're on course, on glideslope, confirm three greens." The controller was checking that the Boeing's undercarriage was down and locked. Rick transmitted an affirmative response.

"Five sixty-five, you're a little left, new heading zero nine eight, on glideslope. Do not acknowledge further transmissions. Confirming you're cleared to land from this approach. If you hear no transmission for five seconds go around, climb altitude four thousand and contact Sondrestrom Radar."

"One thousand," called Rick over the intercom, looking at his altimeter.

"Check," responded Nigel, eyes scanning his instrument panel.

"Flaps fifty, landing checklist complete," from Frank.

"Five sixty-five, on course, on glideslope, range three miles . . . Five sixty-five, on course, thirty feet low, adjust descent . . ."

Nigel eased the nose up a fraction and edged the throttles forward.

"Five hundred," called Rick.

"Check."

"Five sixty-five, on course, range one decimal five, on glideslope . . ."

"Landing lights on," called Nigel, looking up for a second. Two spears of light lit up trillions of swirling snowflakes streaming past the cockpit windows, dazzling the crew.

"Off again!"

"Five sixty-five, you're slightly right, turn left two degrees, new heading zero nine six, twenty feet low, adjust descent."

Rick was alternately watching his instruments and looking ahead for visual contact, any light that might penetrate the bumpy black void. The 707 was descending through three hundred feet towards the minimum of two hundred. "One hundred above," he called.

A terse "Check" from the captain.

"Five sixty-five, on course, turn right one degree, new heading zero nine seven, on glideslope . . ."

"Decision . . . no contact," called Rick as the altimeters sank through two hundred.

"Continue," called Nigel in defiance of SOPs, which required a go around and climb away if visual contact had not been achieved at Decision Height.

"Five sixty-five, on course, ten feet high, range zero decimal five."

"Runway lights ahead!" called Rick and Frank simultaneously.

"I got 'em!" called Nigel, looking up.

"We have contact and we're landing," transmitted Rick.

"Five sixty-five, we're ready for you."

CHAPTER 31

The briefing from BOAC Operations describing the set-up at the United States Air Force Sondrestrom base turned out to be reasonably accurate, although it underestimated the quality of food available. Besides the more predictable burgers, hot dogs and ice cream nutritious comestibles on offer in the officers' dining room included locally caught fish and fresh fruit and vegetables flown in regularly from the homeland.

Seated at one of the tables, enjoying a late afternoon snack, were Captain Nigel Nixon, Senior Engineer Officer Frank Armitage, Professor Madeleine Maunsell and CEO Maxwell Murdoch. At adjacent tables could be found the other members of Foxtrot India's crew and some of the first class passengers. Besides the meal, the crew and passengers were also digesting the news they had just watched on the large television screen fixed to the wall, around which they had crowded as the reported events unfolded. A USAF officer had

apologised for the grainy quality of the monochrome image but pointed out that since the only signal available was from a satellite it was the best they could expect.

Outside in the afternoon sunlight a row of F4 Phantom fighters could be seen on the apron, and a couple of C130 Hercules transports, all adorned with a blanket of snow, the residual evidence of the previous night's storm. Further away the BOAC Boeing 707 stood on a remote taxiway at the far end of the airfield, where it had eventually been towed when the base's commanding officer deemed it safe to do so. After Nigel had brought it to a halt on the runway, max reverse thrust compensating for potential unreliable braking on icy patches, the expeditious deplaning of the passengers had gone according to plan, after which all personnel and vehicles were quickly removed to a safe distance.

Twelve hours later, following consultation with senior officers on the mainland, base commander Colonel Jaymack had asked a crew of volunteer engineers wearing protective clothing to enter the 707's cockpit, release the parking brake, attach a tug to the nosewheel and tow the aircraft to its new location. The passenger doors were checked closed but the hold doors were left open to help to equalise the air pressure should an explosive device be triggered by a delay timer.

A telex had informed Nigel of the plan being put together by BOAC Ops at Heathrow. A bomb disposal team with sniffer dogs was being flown in from the States and when another twenty-four hours had

elapsed they would carefully remove all the bags from Foxtrot India's holds. After inspection the bags would be stored remotely, except for any which aroused suspicion, which would be destroyed in controlled explosions. BOAC had organised dispensation from the British Ministry of Aviation to allow USAF engineers at Sondrestrom to inspect the Boeing for airworthiness. If all was satisfactory the passengers would reboard—without their bags—for the onward flight to London. A Royal Air Force Britannia transport aircraft would be dispatched from RAF Brize Norton to pick up the bags and repatriate them.

It became apparent that the two main items of news that had surprised all who saw them were, in the eyes of those in the know, possibly connected. Firstly, the announcer said, a British jet airliner on route from New York to London had been forced to divert to a military air base in Greenland after an anonymous message had been received saying a bomb was on board in a passenger bag. The aircraft had safely landed in a snow storm, the announcer said, and the authorities were deciding how to deal with the baggage and when it would be safe for the jet to take the passengers home.

Meanwhile, near Mansfield, Pennsylvania, a car travelling west along Highway 6 had exploded, killing the driver and passenger. A truck travelling in the opposite direction had been blown off the road by the blast and although its trailer and load were damaged the driver escaped unharmed. The passenger in the car was a senior member of the Righteous Warriors,

said the announcer, giving the names of the two victims.

At Nigel's table an earnest discussion started.

"It can't be a coincidence," said Frank. "We were told the alleged bomb was in your bag, Max. Did you know the man who was killed?"

"Vaguely. But he wasn't high ranking. If he was intending to kill me he would have been acting on the orders of someone higher up."

"Someone associated with the Hanoi plot?" asked Madeleine.

"Almost certainly. They never forgave me for going to the cops. It was revenge time. Looks like they were going to blow me up on your plane by swapping bags. Maybe they planned to do the swap in the hotel lobby but they fucked it up."

"I suppose they couldn't put obvious identifying marks on the bag with the bomb in case you noticed the difference," said Nigel. "Maybe they got confused themselves. If there were two of them maybe one did a swap and then the second one did another swap, not realising it had already been done."

"So who tipped off the authorities about the supposed bomb in the aircraft?" asked Madeleine. "Why did they do that?"

"Someone who found out there was a plot to kill me," said Max, "but didn't want it to succeed."

"Another question," said Frank. "Why did the bad guys take Max's bag away in their car? I mean, the bag they thought was Max's? Why not just dump it somewhere?"

"Well," said the American, "it would have been incriminating evidence if it was found, wouldn't it? A plane disappears over the ocean and then later on a suitcase belonging to one of the passengers turns up somewhere. Cue intensive investigation by the cops. Better to hang on to it for a while till it could have been properly disposed of—junk the contents and destroy the case. Then no one would have known what caused the plane to come down. It would be a mystery—no evidence of foul play, might have been a technical fault."

"Just had another thought," said the captain. "It looks as if the bomb was triggered by a timer. What time did the car blow up according to the news report?"

"Er . . . just before 11, wasn't it?" said Frank.

"That'll be Eastern Daylight Time," said Max.

"So, where were we at the time?" asked the captain.

"Let's work it out," said Frank. "I'll do it all on GMT then correct for local time." He pulled the typewritten menu on the table towards him and took out his pen.

"Ah . . . Captain Nixon, telex for you, sir." It was a junior USAF officer who gave him a salute and handed over the paper.

Nigel thanked him, whereupon he threw another salute, turned on his heel and briskly walked away.

"It's Ops," announced the captain. "If the bomb disposal chaps are happy they want us to get airborne tomorrow at sixteen hundred GMT, that'll be thirteen hundred, local time. I'd better start organising things."

"Another thought," said Madeleine, "if the bomb was in the car rather than our aircraft, why can't we just take off again with the bags on?"

"They're being super cautious, I suppose," said her brother. "Just in case there's another explosive device. I don't have a problem with that!"

"Interesting," said Frank, clicking his pen. "At the time the car blew up we had just started our descent."

"So if the bag swap had been successful . . ."

began Madeleine.

"We might not be here talking about it," finished Nigel.

"The power of prayer," chuckled Max.

"What do you mean?" asked Madeleine.

"Once you told me we were diverting in case there was a bomb in my case I did a little serious praying. Looks like it paid off!"

CHAPTER 32

Madeleine looked at her watch. Just after nine in the evening, local time. Difficult to reconcile the hands on the watch with the view through the window of her bedroom, with the clear sun still well above the northwestern horizon, glinting on the aircraft parked on the apron. As the USAF officers had explained, at latitude sixty-seven degrees north the late spring daylight lasted twenty hours, with only four hours of twilight and darkness. Not much farther north the sun would never set until the summer turned to autumn.

After dinner in the mess Nigel's group had dispersed. Madeleine said she wanted to rest quietly in her room. Frank and Max had repaired to the officer's bar with other members of Foxtrot India's crew and passengers. Several passengers and First Officer Rick Mountford had accepted the invitation to join the USAF servicemen in the base's cinema for a showing of the Jimmy Stewart film, "Strategic Air Command". Those less enamoured of military aviation

opted for relaxing in the lounge or in their rooms. The captain had taken himself off to his own room, explaining to Madeleine that he wanted to use the time constructively, going through some of his mother's paperwork. He told her that it was just as well he was going to miss the appointment with his solicitor scheduled for the next day as he was nowhere near adequately prepared. He had sent a telex to Ops asking them to arrange a new appointment for the following week. Not violating SOPs, of course, asking Ops to pass on personal messages for his passengers and his crew and himself when those messages related directly to their diversion.

Now Madeleine lay on her bed, mulling over events and the workings of fate. That bomb . . . was the whole thing a hoax, and the exploding car in Pennsylvania just a coincidence? Plausible, but the Righteous Warriors connection suggested otherwise. On the other hand, if you were planning to swap suitcases so a bomb could be planted on an aircraft, surely you'd come up with a foolproof way to distinguish them—a new scuff mark perhaps? Did they swap the label or did they make a copy? Room for confusion there unless they double-checked what they were doing. Did someone deliberately re-switch the bags to kill the car's passenger? But then there would be no need to alert the authorities about Max's plane. Was that the work of another person?

Madeleine sighed. Too complicated! Her mind tried to imagine the consequences of an explosive device detonating in a plane. The 707's fuselage was

pressurised to reproduce a lower effective cabin altitude so it would have to be robustly constructed. Was it designed to tolerate a rupture? Could it have withstood the overpressure from an internal explosion? Would the damaged aircraft be controllable?

If the fuselage had disintegrated, what then? Would the occupants have survived the decompression? Would they be aware of tumbling through the freezing night sky, knowing that imminent ground impact would send them to eternity? Was that what happened to Terry when his Mosquito was shot down over Dortmund?

And what about Emma? Mother killed in a car accident, mother's partner not long after in a plane crash. Would she have been able to cope with a double bereavement?

The professor forced her mind to switch to less frightening thoughts. For example, the idea for a new post graduate project as suggested by a colleague, which might suit one or two of this year's final year students looking to start a PhD. The motivation was the trial-and-error approach that chemists followed in catalyst research. Some people were talking about examining the lifetimes of the hybrid radicals and molecules whose production the catalyst surface facilitated during chemical reactions. Lifetimes were usually measured in milliseconds, but little research had been done into actually measuring them and correlating them to product yield. The demise of the methane reformation project might be postponed or diverted by examining catalyst performance in greater

detail. She'd mentioned the topic to Max who in turn said he'd pass the idea on to his Wilmington team. If they weren't interested Madeleine would have to contact John Davis at the Science Research Council to bring up the hoary old subject of finance.

John Davis. Hmm. He'd actually written her a letter apologising for the embarrassment he'd caused being caught *in flagrante* with Toni. Madeleine thanked him for his consideration and excused him on the grounds that no man would be able to resist Toni's sexual predations. When her lodger was in heat she would not be denied, Madeleine had written. And there was no reason why John and Madeleine should not continue to meet socially.

A sudden roar outside distracted Madeleine from her musings. She sat up to give herself a better view through her window. The glowing afterburners of two pairs of fighters were receding along the runway, their progress marked by a pall of sooty brown exhaust smoke. As Madeleine watched the Phantoms lifted into the blue sky, banked left in a finger four formation and disappeared towards the south, the cacophony of their engines diminishing in proportion.

The professor sank back into her supine position. John Davis. "Continue to meet socially," she had written. What if it developed into something more? If John was too reticent, should she get the ball rolling?

There was a new factor. The night in New York with Nigel. This time they felt no remorse. This was not White Waltham. They agreed that they would make love with all the enthusiasm they could muster. But it would be the last time. The taboos were too strong to

ignore. They knew they loved each other and would continue to love each other passionately. But there would be no more sex. While they lay together in Nigel's bed, exhausted, they both agreed they would find other partners for carnal satisfaction but would forever give their hearts only to each other.

Would John Davis fit the bill for Madeleine? And what about Toni? Knowing her liberal attitudes to these things, Madeleine thought it unlikely she would object. As long as she didn't revive the idea of a threesome! That would be . . . would be . . . what would it be like? No . . .that was an experiment too far . . . wasn't it?

Well, at least she was still alive to think these thoughts, not a jumble of frozen body parts despoiling the Greenland icecap amongst the mangled remains of Foxtrot India and its passengers and crew.

Had Max's prayers saved them? It was many years since Madeleine had been a follower of any religion. Since her teenage years she had come to appreciate the power of scientific reasoning. You made an observation and worked out a theory to explain it. Then you tested the theory in as many scenarios as you could find. If your theory failed you did further experiments and formulated a new theory. The whole discipline of science was based on the interpretation of evidence and rigorous testing of theory.

Religion was the opposite. There were plenty of theories about God but no incontrovertible evidence of his existence. Madeleine remembered a phrase that had come up during a debate about religion during her student days. "Intellectually unsound," was

the comment of a supporter of the motion, "This house considers religion is bunk." Madeleine's own input was that despite all the prayers to God asking for relief from human suffering, there seemed to be no end to wars, disease, poverty, earthquakes, floods, droughts and other worldly tribulations. She remembered that the motion was narrowly defeated.

In a way, Madeleine envied those of faith, who believed in miracles, the Virgin Birth, the Resurrection and the Ascension, all of which violated the laws of physics. And Life after Death. If only she could share their faith. But there was insufficient evidence!

And yet . . . Max had prayed that the 707 and its occupants would arrive safely and so they had. Divine intervention or—

A knock on her door.

"Come in," she called, too lazy to stir.

It was Nigel, looking somewhat distracted. He walked over to the bed, holding out some sheets of paper. "I've just found these among my mother's documents. I'll give you a moment alone to read them, then I'll come back."

The captain left, closing the door on his way out.

Madeleine roused herself and sat on the edge of her bed. She started to read.

Darling Dot,

Sorry to hear you're so upset. It must have been a dreadful shock. Having given it some thought perhaps the best option is to keep the baby. I'd be happy to pay for an abortion if absolutely necessary but it would be fraught with danger, never mind the

illegality. You'll have read of cases where abortions have been incorrectly performed by people with inadequate training and women have died of uncontrollable haemorrhaging or infection.

You say you don't know who the father is and it's more likely to be me than Henry because we're "together" more often than you are with him but there would be no way of knowing for sure. And you don't need to worry when you say people will wonder about your sudden increase in fertility after years of being unable to fall pregnant with Henry—after all these things are not unknown. The physical differences between me and Henry are not that marked—I'm a bit taller and my hair a bit lighter so any child I might conceive with you could be passed off as Henry's.

So, darling, tell me what you think. I say, let's let the pregnancy continue—we can't make the situation any worse and we can carry on seeing each other. You never know—the baby might actually be Henry's!

So—next Thursday? Please say yes. And carry on saying yes.

*Your devoted slave,
Sebastian*

23rd September 1952

Dear Mrs. Nixon,

With regard to the recent examination of your left breast I am happy to confirm that the swelling has been diagnosed as an adenoma, which is a benign (non-cancerous) growth. Although adenomas rarely develop into cancers I think it would be a good idea to monitor your condition and for you to see me every two to three months or at any time you think the adenoma has changed its characteristics. At the moment no surgical intervention is necessary.

On a different matter, when I checked the summary record for your family I found a discrepancy in the recorded blood groups. The summary shows Group O for you and your ex-husband and Group A for your son Nigel. It is impossible for husband and wife with Group O blood to conceive a child with Group A.

The most likely explanation is a clerical error, which should be corrected. When convenient, please arrange an appointment with my nurse for a blood sample to be taken. There is no urgency about this but it is essential that your blood group is correctly identified prior to any blood transfusion you may require in the future. If you would be so kind as to notify me of your son's and your ex-husband's GPs (if you have this information) I will write to them asking them to arrange the same.

I hope this letter brings you reassurance.

Yours sincerely,
Arthur Black, M.D.

Open mouthed, Madeleine slowly lowered the hand that had been holding the documents. "No . . ." she breathed.

Another tap on the door.

"Come in, Nigel."

He stood at the open door, his expression troubled, uncertain.

"You've read them, then?"

"Yes."

"Do you understand what they mean?"

"Yes."

"What do you think?"

"Close the door and come here."

THE END

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