

## *Unmasking GCHQ: The ABC Trial*

*We've been to MI5, MI6, Scotland Yard, Parliament and many more. Now we're going where much of the dirty work goes on – CHELTENHAM!*

ABC trial campaign newsletter, 27 May 1978<sup>1</sup>

During the late 1960s and early 1970s, signals intelligence was changing fast. The big players were discovering a whole new world of super-secret interception which provided a different sort of signals intelligence. This new source was telephone calls. As we have already seen, tapping telephones was hardly new, and had boomed in the 1950s in response to problems with reading high-grade codes. However, telephone calls were now increasingly being routed away from old-fashioned cables, which were hard to intercept, especially within secure states like the Soviet Union, and being carried by the more modern means of radio links, using microwave towers and satellites. This was a vastly more efficient system of communication, especially for long-distance or international calls. One of the side-effects was that conversations now spilled freely into the ether, making the possibilities for interception almost limitless. The best thing about this new source was that the material was often not encrypted so it provided a veritable fountain of intelligence virtually for free. A sigint revolution was just around the corner.

The downside of these new developments was that they produced inconceivable volumes of material. Computers were no longer needed just for breaking codes, but also for combing through the intelligence, storing it and distributing it to customers. The volume of sigint that was being collected was

too large for any human to read. Moreover, the vast complexes of domes and satellite dishes that now accompanied the supposedly super-secret intelligence activities of NSA and GCHQ meant that they were more and more visible. Sooner rather than later, an enterprising investigative journalist was bound to point to these surreal installations and shout the dreaded words 'Signals intelligence.' It is amazing that in the mid-1970s GCHQ was still managing to pass itself off as a glorified communications relay station, hiding its real activities from public view. Anonymity would not last much longer.

What we now recognise as the first glimmerings of a global telecommunications revolution seemed to be in the interests of the world's major sigint agencies. A fascinating example of this was an operation carried out jointly by the British and Americans in 1969. NSA was gathering a great deal of intelligence from telephone calls between Fidel Castro's Cuba and the many Cuban exiles living in Florida. Using sigint ships, it was also possible to intercept some calls from Havana to other parts of Cuba. This was of some importance, since an elaborate game of cat and mouse was being played between the CIA and the Cuban intelligence service among the exile communities of Florida. Most of the calls were carried on a radio network called a tropospheric scatter system, owned by the Radio Corporation of Cuba, which also carried teletype traffic. The Radio Corporation of Cuba was a subsidiary of the American telecommunications giant ITT which had been gleefully nationalised by Castro when he came to power in 1959, along with all other American businesses on the island. The radio installation in Cuba was in need of a substantial upgrade, requiring new condensers and transistors, leading the Americans to fear that the link would cease to function, and the telephone calls would be sent by a different route, perhaps by cable, which was much harder to intercept.

Because America maintained a strict economic blockade of Cuba, it needed to subvert its own embargo in order for the necessary material to reach the island – besides which, if it came direct from America, the uncharacteristic generosity would alert

the Cubans to the interception. The Americans turned to Britain, which had no embargo on Cuba, explaining that 'The intelligence community regards the maintenance of the link as being of considerable importance.'<sup>2</sup> The British, for their part, welcomed the opportunity of placing the Americans in their debt by participating in a covert operation.<sup>3</sup> The materials were duly shipped to Britain, and then re-exported. NSA ensured that the suppliers were indemnified against legal action for breaking the embargo, while ITT used its subsidiary in Britain, Standard Telegraph & Cable Ltd, as a cover to make the delivery.

One of GCHQ's largest ventures into the world of vacuuming up telephone calls was launched in Cornwall in 1967. At Goonhilly Downs on the Lizard peninsula there was a satellite receiving station for one of the world's first commercial communications satellites, Intelsat. Intelsat was a booming commercial venture that carried a growing proportion of the world's private communications, and was partly responsible for the explosion of international telephone calls. The system grew from 240 channels when it opened in 1964 to thirty thousand in 1983.<sup>4</sup> Displaying a certain amount of barefaced cheek, GCHQ built a duplicate receiving station about sixty miles down the road, near the village of Morwenstow, on the site of a former RAF wartime airfield. Here it could scoop up the same telephone traffic by simply collecting the 'spillage' as commercial satellites beamed messages down to earth. This station, with its distinctive domes and satellite dishes littered along the Cornish clifftops, was initially called CSO Morwenstow, and later changed its name to GCHQ Bude. Morwenstow was a classic Anglo-American intelligence venture. NSA paid for most of the infrastructure and the technology, while GCHQ contributed the land and paid for the staff and running costs. The massive flow of intelligence it received was shared and processed jointly.<sup>5</sup>

In 1969 GCHQ was working hard to develop revolutionary new systems for analysing and distributing the huge volume of intelligence intercepts, with computers being used to search for

keywords that indicated subjects of interest. On 3 March Joe Hooper, the Director of GCHQ, explained to Dick White, the Cabinet Office Intelligence Coordinator, that the sigint collected at Bude would shortly be fed into a computer database that would be used by Britain and the USA to select product. The main challenge was restricting access to information at the right level to people with the right clearances. This, Hooper explained, involved 'a complicated system of "gating" in the computer programmes'. This was the first British venture with secure multi-level access computer systems for delivering intelligence.<sup>6</sup>

GCHQ was at the cutting edge of what would eventually be a transformative technology for all kinds of researchers. In the past, anyone who wanted to look at large volumes of newspapers would have to trawl laboriously through them physically. The time and effort involved meant that they could focus on only a few chosen titles. Today, accessing the world's press is effortless and can be done at the click of a mouse, because it is available electronically. The downside, again, is 'too much information'. Nobody can read all the world's press, so modern researchers use word-search facilities like Google Alert. In exactly the same way, NSA and GCHQ could not listen in to the entire world's satellite telephone calls, telexes and faxes. So they fed all the material into computers and built a top-secret equivalent of Google Alert, constructing computers that combed the traffic for keywords and predesignated phrases. This system was called 'Dictionary'.<sup>7</sup>

Each new form of interception presents fresh legal challenges. GCHQ's collection operation at Bude took three forms. At its most expansive it involved baseband trawling, which meant moving through large volumes of traffic from each country that was being monitored to find out whether material of interest was passing through particular channels. Next, there was a system that allowed the interception of all the traffic from a particular telephone dialling code, in other words perhaps one section of a city. Thirdly, there was the monitoring of specific telephone numbers. Initially, the GCHQ staff were uncertain

about the legality of some of the broadband trawling, which included some British channels. For reasons that are not entirely clear, managers eventually persuaded them that it was not a legal issue. Allegedly, specific British numbers were targeted, and these were known as 'P-Numbers'. GCHQ was already beginning to encounter what we now recognise as one of the key characteristics of globalisation – the mixing up of what is inside and outside the nation state. Previously there had been a clear dividing line between domestic and international communications, which made for useful legal distinctions in the realm of interception. During the 1970s these distinctions were beginning to break down.<sup>8</sup>

Even telephone messages that were not carried by satellite were vulnerable, because they were increasingly being beamed between microwave radio towers. The beams travelled in a straight line, eventually spilling out into space because of the curvature of the earth. This led to yet another collection revolution, since the Americans discovered that much of this telephone traffic was vulnerable to interception by a new generation of sigint satellites. By the 1970s these were scooping enormous amounts of communications from space. One of the first major dividends was an improved ability to listen in to Moscow. NSA began to listen in to telephone calls in the Soviet capital, and also to the radio messages of taxi drivers and the Zil limousines used by the Politburo. The drivers gossiped constantly about their passengers, revealing fascinating insights into life amongst Russia's elite. Alas, this was revealed publicly in the *Washington Post* in September 1971 by the renegade American journalist Jack Anderson.<sup>9</sup>

The ability to listen in to telephone calls carried by radio waves meant a radical shift in GCHQ's business all around the world. In August 1974, British officials noted with delight that Syrian communications security was unsophisticated, and that 'In some quarters the open telephone is treated as if it were secure.'<sup>10</sup> GCHQ also had to assist friends and allies to protect them against

the new sigint techniques: in Oman, for example, speech security equipment was installed.<sup>11</sup> The Joint Intelligence Committee also began to rethink Britain's intelligence targets in Europe because of this telephone sigint bonanza, which it coyly referred to as 'advances in intelligence-gathering by technical means'.<sup>12</sup> By 1973, new subjects had joined Russia as 'Priority One'. These included the 'Stability of the UK', which required intelligence to look inwards. Specific new targets included the IRA and extremist organisations within Britain. The other new priority, which had been growing fast since the 1960s, was Western Europe. Intelligence on West Germany was now far more valuable than intelligence on East Germany. Britain needed to know what Bonn thought about Britain's diplomatic recognition of East Germany, Britain's entry into the Common Market and major arms deals such as the new NATO Tornado Multi-Role Combat Aircraft that would eventually equip the air forces of Britain, West Germany and Italy. Britain's senior policy-makers also wanted better support for the sort of guerrilla wars that had flared in Cyprus, Aden and Oman during the 1960s and 1970s.<sup>13</sup>

NSA was already experimenting with sophisticated satellites that would revolutionise sigint activity by focusing on signals that were above the high-frequency range.<sup>14</sup> On 19 July 1970 America launched its first operational Ryolite satellites, which stayed broadly in the same place above the earth, requiring ground stations in specific locations to receive the voluminous sigint that they beamed down.<sup>15</sup> These stations were constructed at Pine Gap in Australia and at Menwith Hill near Harrogate in Yorkshire. Menwith Hill had been a field collection station for the US Army Security Agency since the 1950s, but was later taken over and run directly by NSA. By the 1970s it had been vastly expanded, and had become the largest American overseas intelligence base in the world. Its dozens of space-age domes, each of which hid a satellite dish, looked somewhat incongruous amongst the grazing cattle of the Yorkshire countryside. Now, its main purpose was to download torrents of

sigint collected by the new generations of American sigint satellites. About 15 per cent of this 'overhead' material was diverted to Cheltenham, where a new super-secret section of GCHQ's Soviet Section (J Division) – code-named J-Operations or 'J-Ops' – was set up to handle this new influx of sigint.<sup>16</sup>

Much of the popular anxiety about the vast American ground station at Menwith Hill, nominally disguised as an RAF station, has focused on its connection to the nearby Hunters Stones Post Office Tower, which forms part of the British microwave telephone network. For years, campaigners protesting against the American base insisted that this allowed NSA to eavesdrop on British domestic communications. This was fervently denied by Albert Braeuninger, the base commander in the early 1980s, who insisted that NSA was merely a customer of British Telecom. This statement was correct, but it actually hid a different secret. Much of the product from the Ryolite satellites was being routed over this microwave network to GCHQ's secretive J-Ops section, where it was processed locally on behalf of NSA. This indicated an important change in status for GCHQ in the late 1970s and 1980s, since it increasingly became part of the processing system for what NSA collected.<sup>17</sup>

NSA's new satellites were actually a major problem for the Americans by the late 1970s. The 'take' from these sources was enormous and still growing, yet funding for NSA was being reduced as a result of post-Vietnam defence budget cuts. NSA's own historian, Robert Johnson, notes: 'Scarce resources meant reliance on outside help. As the budget got slimmer, NSA turned increasingly to the help that foreigners could provide. This trend accelerated in the 1970s to a greater degree than at any time in post-World War II cryptological history.' The collaboration between GCHQ and NSA was 'almost total', and at 'each bend in the road, NSA made the conscious decision to remain engaged'. Indeed, these developments, which also involved other friendly countries, were so important that NSA appointed a 'Third Party Manager' to look after the increasingly complex relationship with allies.<sup>18</sup>

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The sigint satellite revolution was an unsettling experience for GCHQ. Although the British were 'in' on developments such as Bude and Menwith Hill, they were not 'of' them, since they had no satellites of their own. The golden age of high-frequency ground-based interception by manual operators sitting in nissen huts was drawing to a close. Major overseas sigint sites, such as Cyprus, were still vital, especially for missile surveillance. However, broadly speaking, the satellite revolution, together with the possibilities of remote collection, was gradually downgrading the value of GCHQ's exotic real estate. Meanwhile, the advent of satellites created a new super-club of sigint powers, of which there were only two members, America and Russia. It was a club that GCHQ ached to join.

In one area, GCHQ was joining the satellite club. This was the field of communications satellites for forwarding sigint from collection stations to GCHQ, and for communicating with NSA. In the early 1950s, communications between GCHQ and NSA were poor, due to insufficient cables and inadequate clear radio frequencies.<sup>19</sup> In 1956, the transatlantic channels between the two agencies were suffering outages of over four hours a day.<sup>20</sup> The main worry was enemy disruption in any future conflict. A secret study had concluded that the Soviets were likely to try a range of sabotage tactics in war, among the easiest of which was trawling up cables and cutting them. Transatlantic cables were at 'trawl depth' for long stretches, and the Soviets were expected to deploy specially modified nuclear submarines for the task. Other options were available, including the use of KGB agents to place 'clandestine, low-powered jammers' close to the relay stations.<sup>21</sup> By the 1970s Britain would be overcoming some of these problems with its own military communications satellite, called 'Skynet'. Skynet also provided secure encrypted speech facilities to the military wherever a Skynet terminal existed. The first Skynet satellite was expected in 1969, followed by a progressive build-up of further satellites and ground terminals. In obscure locations such as Bahrain, GCHQ was the largest

Skynet user. On Cyprus it required no fewer than eight channels, and was responsible for more than 80 per cent of the traffic coming back to Britain. Much of this was data on Soviet missiles from Project Sandra and Project Cobra Shoe.<sup>22</sup>

Skynet was a major scientific achievement, and represented Britain's first significant step into space. The launch of the satellite was regarded as a cause for national celebration. In November 1969 the RAF was invited onto the BBC children's programme *Blue Peter* to display a mock-up of the satellite which was admired by the presenters Valerie Singleton, John Noakes and Peter Purves. The programme also described Britain's new satellite control centre at RAF Oakhanger. However, no public mention was made on *Blue Peter*, or indeed anywhere, of Skynet's biggest single customer, namely GCHQ.<sup>23</sup>

The capacity provided by Skynet was enormous, yet the planners noted that it was 'adequate for all users of data except GCHQ'. The unimaginably huge amount of intelligence it was sharing with its main partners meant that GCHQ still required its own dedicated cables to NSA, the Canadian CBNRC and the Australian DSD.<sup>24</sup> By February 1972, the Cabinet Office was beginning to look at the next generation of Skynet satellites and its alternatives, at a cost of about £50 million. Again, the biggest customer was GCHQ.<sup>25</sup> All of its allies, especially the CIA, were now 'satellite-conscious'.<sup>26</sup> GCHQ pressed for closer integration with the United States, arguing for an off-the-shelf American Type-777 satellite, which was hardened to withstand some of the effects of a nuclear explosion. However, government Ministers were desperate to maintain a British national space programme, so they chose Skynet III.<sup>27</sup>

Preserving UK national reserves of knowledge and expertise was something that GCHQ touched on in many ways. For example, it had long helped to steer policy on the teaching of languages like Chinese in British universities.<sup>28</sup> More importantly, it had a role in the development of British computing. Code-breaking had driven important breakthroughs in computing both during and after the Second World War, led by

luminary figures such as Alan Turing. The most famous example is 'Colossus', which was used to attack 'Tunny', the encyphered teleprinter used by the German High Command. Ten examples of Colossus II were in operation by the end of the war. Other early computers called 'Robinson' and 'Aquarius' were no less innovative. Both Robinson and Colossus were designed and built at the Post Office Research Station at Dollis Hill by the celebrated Tommy Flowers, now recognised as one of the most enterprising scientists Britain produced during the war. At the end of the war a number of engineers moved from Dollis Hill and the British Tabulating Machine Company at Letchworth to join GCHQ at nearby Eastcote.<sup>29</sup>

Colossus marched on into the early Cold War period. The last two Colossus II machines were assembled at Eastcote rather than Bletchley, and code-named 'Blue' and 'Red'. These were rebuilt between 1948 and 1951, before being taken to Cheltenham in 1953 and employed until 1961. Also using the Colossus circuits were four new Robinson machines that were installed at Eastcote. These were eventually overtaken by 'Colorob', a new specialist machine developed with help from the defence electronics firm Ferranti and Manchester University. The most important GCHQ computer development was 'Oedipus', the first machine to exploit high-speed storage. Begun in 1951, Oedipus could store ten thousand fifteen-character phrases on its drum memory, an achievement far ahead of its time.<sup>30</sup> The significance of Oedipus was that it was a powerful rapid-character-comparison machine with a capability greatly exceeding that of any general stored programme machine available commercially in the 1950s and 1960s. Much of this elaborate technology was devoted to unsuccessful attacks on high-grade Soviet diplomatic cyphers.<sup>31</sup>

However, GCHQ's impact on computer development was not as great as that of NSA. Although NSA pursued a 'policy of anonymity', it was nevertheless later able to claim a string of very considerable computer firsts. Typically, the 'Atlas 1', delivered to NSA in December 1950, was the first parallel electronic



computer with a drum memory. Its successor, 'Atlas 2', delivered in December 1953, was the first core memory computer. In March 1958 NSA received the first computer that relied wholly on transistors, called 'Solo', which became the model for many of Philco's later commercial designs. In February 1962 it took delivery of 'Harvest', the first large computer with a completely automated tape library. Harvest strongly influenced the design of the IBM System 360, a breakthrough machine which was a familiar sight in GCHQ's vast computer hall by the late 1960s.<sup>32</sup> The later IBM-700 series was soon the mainstay of core operations at NSA and GCHQ. By 1968 Marshall Carter, NSA's Director, could boast that he had over a hundred computers occupying almost five acres of floor space.<sup>33</sup>

In 1977 GCHQ took delivery of the first of its advanced American-built Cray super-computers. A super-computer breaks a problem down into many tasks that can all be done at the same time. By using different parts of its brain in parallel it can undertake vast calculations unbelievably quickly. The main applications are code-breaking, designing nuclear weapons and weather forecasting. At this time the world of super-computers was led by Seymour Cray, and the first production model rolled out of his company's factory at Chippewa Falls, Minnesota in the spring of 1976. This was delivered to NSA, while the second went to NSA's mathematical think tank at Princeton University.<sup>34</sup> Remarkably, a Cray machine for Cheltenham was already under construction, and was shipped across the Atlantic the following year. In the autumn of 1976 the impending arrival of the Cray drove some of the construction work at GCHQ's Benhall site, including a new building for the computer staff – known as X Division – together with a new Special Compartmentalised Intelligence Facility with reinforced strongrooms to hold their documents.<sup>35</sup> The new Cray machine was so powerful that it required elaborate cooling, and much of the redevelopment at Cheltenham was in order to provide special ventilation and a supply of 'chilled water direct to computers'.<sup>36</sup> All this reflected a strategic decision by NSA to place more emphasis on super-

computing, a decision which was followed by GCHQ.<sup>37</sup> They were soon rewarded, for in 1976 the West recovered the long-lost ability to read some high-level Soviet communications, including telegrams between Moscow and the Soviet Embassy in Washington.<sup>38</sup>

GCHQ was also making an important transition from using computers just for cryptanalysis to using them for everything, including sending sigint to customers. This was the beginning of a revolutionary breakthrough. As early as August 1967, Foreign Office planners remarked, 'We hope to get proposals shortly from G.C.H.Q. in Cheltenham which would provide methods of random access by desk officers to the computer itself.' GCHQ hoped that this would provide something like near real-time distribution of its precious sigint product to users in Whitehall. In the 1970s the old 'blue jacket' files full of sigint intercepts started to disappear, and online access for policy-makers slowly began to take over.<sup>39</sup> Computers were also being used widely inside GCHQ. In 1967, Ken Sly, who had commanded the sigint unit at Hong Kong, took over from Nicodemus Doniach as head of a GCHQ branch called the Joint Technical Language Service, a group of thirty highly qualified linguists who not only undertook translations, but also compiled material ranging from dictionaries of Soviet military terms to handbooks of Arab names. When Sly took over they were working from a vast wall of index cards thirty yards long. He began a determined programme of computerisation, so this vast body of knowledge gradually became available to everyone in GCHQ.<sup>40</sup>

This change was of the first importance. GCHQ could see that computers were the shape of the future, and wanted to use them to improve every stage of the intelligence process. However, the gap between ambition and reality was huge. In 1973 GCHQ was still at the basic stage of trying to get lists of its previous files onto computer, moving away from card indexes. The ambition was to get enough information about the files into the system to allow for keyword searching. However, there

use of computers for data storage meant this was the future. 'Most Sigint end-product already contained simple machine symbols' as a result of its journey through the communications system, and NSA already maintained 'an almost complete file of Sigint end-product for retrieval' on computer. In June 1971 Poulton was rightly predicting that these changes would spread through the entire Western intelligence community over the next ten years.<sup>50</sup> By 1974, Dick White's successors as Intelligence Coordinator would be looking to computers in a desperate effort to cut staff numbers in the face of swingeing cuts to the intelligence and defence budgets.<sup>51</sup>

In the early 1970s the public knew almost nothing about the breathtaking achievements of high-tech espionage. Overhead, satellites were collecting millions of telephone calls which were then being word-searched by computers of mind-boggling complexity. Yet the British people were still not even aware of the wartime achievements of Bletchley Park. Ultra and its conquest of the German Enigma machine were still shrouded in government secrecy. Indeed, the official histories of the Second World War had been artfully constructed to hide code-breaking and deception from public view. But in 1974 all was suddenly revealed in a memoir called *The Ultra Secret* by Frederick Winterbotham, who had looked after the distribution of Ultra to operational commanders in the field. Those who had worked at Bletchley Park had taken their vows of secrecy very seriously, and in some cases for thirty years had not told even their husbands or wives what they had worked on during the war. Now they could speak about what they had done.<sup>52</sup>

Kim Philby was a major reason why the government eventually chose not to oppose the publication of Winterbotham's tell-all memoir. Burke Trend, the Cabinet Secretary, hoped that the revelations it contained would help restore the reputation of British intelligence, which had taken a battering in recent years as a result of the vast publicity given to the defection of the KGB moles who had burrowed deep inside the intelligence

services. Philby's deliberately misleading memoir, published in 1968, was especially damaging, and had prompted the government to produce its own official history of intelligence, and even to release some wartime sigint records from Bletchley Park for use by historians.<sup>53</sup> Managing the public image of the intelligence community was entirely new territory for the authorities, who now faced the nightmare task of screening top-secret files before they reached the Public Record Office at Kew. The archives from the Second World War were enormous, and weeding them to extract the specific bits of intelligence material that were still deemed too sensitive for release was a Herculean task. However, officials were spurred on by news that the Soviets were taking a close interest in what was released. In July 1970 the Security Department of the Foreign Office warned that the Soviets had sent a researcher from Moscow to look through the newly released records at Kew, 'not merely from a historical point of view but also with an eye on current British government procedures'. Officials observed that 'Time spent in cleansing the record of intelligence . . . is not spent in vain.'<sup>54</sup>

What the KGB had already managed to find out about current GCHQ activities had formed part of the deliberations over the release of wartime sigint records from Bletchley Park. 'The Russians in particular know of our sigint successes,' noted one official, adding that the worst leaks had occurred because of 'three defectors from NSA who were fully informed on Anglo/US sigint in the '50s and early '60s'. Primarily, this was a reference to the defection in 1960 of the American code-breakers William Martin and Bernon Mitchell, who had talked enthusiastically at a press conference in Moscow about the way in which the West had collected and broken the diplomatic traffic of countries like Egypt and Indonesia. The third NSA defector was Jack Dunlap, who revealed a great deal about code-breaking to the Soviets in 1963. The British officials failed to mention their own security problems with figures such as Douglas Britten.<sup>55</sup>

Whitehall and Washington were now badly out of step. Timorous figures from GCHQ had spent the early 1970s worrying

over the protection of wartime secrets. Suddenly, in 1974, to the horror of British officials, the Americans began to expose current secrets. In Washington the secret state was in full retreat as the American psyche suffered the triple blows of Watergate, Vietnam and the Oil Crisis. One of the manifestations of this new self-questioning political climate was court decisions which upheld the rights of dissident intelligence officers to write their memoirs. A CIA officer called Victor Marchetti had teamed up with a diplomat to write one of the first revelatory accounts of the CIA. The US government had demanded over two hundred deletions, but the courts later reduced this to twenty-two. Britain was alarmed. One of the joint operations revealed in the Marchetti book was the shared nature of Britain's massive sigint and radar complex on Cyprus. In April 1974 Harold Wilson had just begun his second administration, and his new Cabinet Secretary, John Hunt, warned him of a 'potential danger' to the continued operation of Sandra and Cobra Shoe, with their ability to look deep into Soviet airspace, since the Cypriots did not know about American participation in these projects.<sup>56</sup>

The following year, the British intelligence community was shocked to the core by Congressional inquiries into intelligence under Senator Frank Church. The revelations included discussion of planned assassinations by the CIA. Richard Helms, who had been Director of the CIA until 1973, confided his feelings to his friend the former Hut Six code-breaker Bill Bundy. Helms felt he had 'maintained discipline' during his own tenure, but now 'the dam had broken' and secrets of all kinds were spilling out.<sup>57</sup> British intelligence applied continuous pressure on the Americans to avoid revelations about their joint operations. In early April 1976 George Bush, the fourth new CIA Director in as many years, came to visit Harold Wilson. One of his purposes was to reassure the British that the Americans had curbed the Church Committee hearings, with their 'vociferous demand for general disclosure of intelligence procedures'. British officials hoped that at last the pendulum had begun to swing back in favour of secrecy. John Hunt asked Wilson to take the oppor-

tunity during their discussions to reassure Bush about the high value Britain continued to place on the Anglo-American intelligence relationship. Hunt added that this relationship was on the up, because the Americans were under financial pressure and had lost listening stations in South-East Asia and in Turkey, making them more dependent on British help.<sup>58</sup>

Harold Wilson, now moving towards the end of his second term as Prime Minister, was both fascinated and terrified by intelligence matters. Unlike his officials, he seemed to rather enjoy the revelations of the Church inquiry. Indeed, only a month before George Bush arrived at Downing Street, Wilson had been visited by Frank Church, and spent longer chatting with him than he did with Bush. Church explained the workings of his Congressional inquiry at length, and Wilson responded that he 'had always been assured that the CIA were not engaged in covert operations in this country', adding that he thought this was '98 per cent true'. Church said that he had been given the same assurance, and 'agreed with his qualification'. Wilson then began to reveal some of his own espionage obsessions, especially his fears about South African intelligence agents in Britain who were active in the cause of apartheid, explaining that he thought both the CIA and the notorious South African secret service (BOSS) were behind the recent recruitment of British mercenaries for service in the Angolan civil war. Wilson also pressed Church on the possibility of the CIA having paid bribes to British companies. Church departed, assuring Wilson that he would send him his findings on CIA activities in Chile.<sup>59</sup> Even more remarkable than the Church inquiry into the nefarious doings of the CIA was a parallel Congressional inquiry into NSA during 1975 which had uncovered 'Project Minaret', the illegal monitoring of domestic radicals. Although this inquiry had been secret, the material reached the front page of the *New York Times* in January 1976.<sup>60</sup> By February, former NSA director Lew Allen was embroiled in legal action.<sup>61</sup>

This vast outpouring of secrets and scandals soon reverberated in Britain. The most obvious target for British journalists



was the activities of the CIA station in London. On 1 July 1976, three days before the bicentennial anniversary of American Independence, Maurice Oldfield, the Chief of SIS, spoke on the subject of Anglo-American intelligence relations. The occasion was the departure of the retiring head of the CIA station in London, Cord Meyer. Oldfield chose to praise Meyer's extreme forbearance under 'continuous and continuing press bombardment'. The Americans only had themselves to blame, since almost incredible stories were spilling onto the front pages of their newspapers. All enterprising British journalists had to do was read the latest spy revelations in the *New York Times* and the *Washington Post*, then think about what the British connections to these stories might be. Many of the latest exposures concerned NSA's high-tech world of sigint, satellites and computers, and the press in London was soon asking questions about a mysterious British organisation called 'GCHQ'.<sup>62</sup>

GCHQ was unmasked in the summer of 1976 when the British investigative journalist Duncan Campbell wrote a pathbreaking article in *Time Out* magazine entitled 'The Eavesdroppers' with an American colleague called Mark Hosenball, giving great detail about both GCHQ and NSA activities.<sup>63</sup> In Campbell's own words, this was 'the importation from the United States of post-Watergate investigative journalism', something that was adopted by radical and left journalists in Britain 'at considerable speed'.<sup>64</sup> Campbell had interviewed a dissident former member of NSA who was visiting London, and then carried out his own research on GCHQ, piecing the story together from overlooked fragments of published material. The article was the first public exposure of what the agency actually did, and revealed significant details about the latest high-tech methods of interception. Cheltenham was horrified, and Mark Hosenball was quickly deported by the government as a threat to national security.

Shortly after the 'Eavesdroppers' story appeared, Campbell and another radical journalist, Crispin Aubrey, were contacted by John Berry, a soldier who had served for many years with 9 Signals at the Ayios Nikolaos sigint base and who had read

the article. Berry recounted his own experiences, which included listening in on armoured formations during the Yom Kippur War. He had once 'heard a cry to Allah by an Egyptian soldier as his tank was hit by an Israeli shell'. Alerted by the 'Eavesdroppers' story, MI5 had been watching Campbell closely, and after meeting at Berry's flat in February 1977, Aubrey, Berry and Campbell were arrested and prosecuted under the Official Secrets Act. This soon became known as the 'ABC trial', after the initials of the three defendants' surnames.<sup>65</sup>

The ABC trial was all about suppressing sigint secrets, and quickly became a *cause célèbre*. The prosecution fielded various sigint experts as witnesses, but tried to keep their identities secret, introducing them only as 'Colonel A', 'Colonel B' and so forth. A furore erupted when 'Colonel B' was revealed in the House of Commons to be none other than the redoubtable Colonel Hugh Johnstone, who had marched out to face down the Turkish tanks on the perimeter of the Ayios Nikolaos facility on Cyprus in July 1974.<sup>66</sup> At the trial, the defence counsel discovered that not only had the prosecution secretly applied to the judge to vet the jury, but that the jury contained three members who had signed the Official Secrets Act – indeed, the foreman was boasting to fellow jurors of his exploits in the SAS. When this was revealed on a television programme hosted by Russell Harty, the judge felt the process had been compromised and discharged the jury. A retrial had to be initiated, and proceedings were still ongoing in the summer of 1978.<sup>67</sup>

A vigorous 'ABC Defence Committee' was operating from the *Time Out* offices in Southampton Street in London in support of the accused. The government took great interest in the ABC Defence Committee, and a vast amount of very recently declassified material in government files suggests that the authorities had people infiltrating the campaign. Government officials had only recently been debating whether to unveil the wartime Ultra secret, and now – to their disbelief – GCHQ's current activities from locations such as Cyprus were in the public eye. The trial only raised the public profile of GCHQ further. On 10 March

1978 the ABC Defence Committee's provocative newsletter announced a demonstration planned for 25 March which would begin at GCHQ's Benhall site and end up at the main site at GCHQ Oakley. It urged:

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Now we have an excellent opportunity to get across – not least to the people of Cheltenham – what SIGINT is really doing, the fact that it's illegal and the role of GCHQ as the hub of the system . . . We've been to MI5, MI6, Scotland Yard, parliament and many more. Now we're going where much of the dirty work goes on – CHELTENHAM!<sup>68</sup>

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GCHQ had noted that Duncan Campbell had been investigating the American sigint site at Chicksands in Bedfordshire, that focused on the Soviet Air Force, and was clearly anxious about how the Americans would react to this.<sup>69</sup>

When the ABC trial recommenced in the summer of 1978, the government was severely embarrassed. It turned out that most of the information that it deemed secret, including the duties of Colonel Hugh Johnstone at Ayios Nikolaos, was freely available to the public in the journal of the Royal Signals Regiment, *The Wire*. In August the defence took advantage of its increasingly strong position and offered a plea bargain.<sup>70</sup> David Owen, the Foreign Secretary, had initially supported the prosecution, but now badly wanted the case dropped, urging that 'Almost any accommodation is to be preferred.'<sup>71</sup> As a result, Aubrey, Berry and Campbell were convicted of minor breaches of the Official Secrets Act, but most of the charges were dropped. Anthony Duff, the new Coordinator of Intelligence, considered that the overall impact of the case was 'to make it more difficult to continue to refuse to acknowledge that we undertake SIGINT in peacetime or that GCHQ is involved'.<sup>72</sup> The Foreign Office legal adviser had been inspired by the case to look into whether the interception of communications between diplomatic missions in London and their home capitals was legal. He concluded that 'It now seems clear that it is at least a dubious practice.'<sup>73</sup>

The ABC trial was a landmark event. GCHQ had now been publicly 'outed' as Britain's signals intelligence centre – even though government officials steadfastly refused to acknowledge the fact. Moreover, it inspired radical campaign groups to begin 'watching the watchers'. They now probed constantly for new examples of secret activity that they could discuss in the radical press. The group that officials found most alarming was the State Research Association, which had been fostered by the National Council for Civil Liberties and was funded by the Rowntree Foundation. Its purpose was to publish material on recent developments in internal security and espionage, and its membership overlapped with the ABC Defence Committee. Its secretary was Tony Bunyan, and horrified defence officials noted that all the members 'can be broadly described as unaffiliated revolutionaries'.<sup>74</sup> Michael Hanley, the Director General of MI5, identified Duncan Campbell as the person of greatest interest.<sup>75</sup>

The ABC trial showed that sigint, with its vast satellite dishes and computers, was now just too big to hide. In 1978, as the trial drew to a close, the Cabinet Secretary, John Hunt, advised Prime Minister James Callaghan that there had been numerous press references to 'the intelligence role of GCHQ, to its Director, to some of its stations, to its relationship with NSA and to the fact that it succeeded the Government Code and Cypher School'.<sup>76</sup> The government has repeatedly claimed that GCHQ's identity as an intelligence organisation was only revealed in the 1980s. In reality, it was already widely known by 1976. What finally pulled the lid off Cheltenham was a revelatory book called *The Puzzle Palace* by the investigative journalist James Bamford. Published on 23 September 1982, it detailed the super-secret relationship between NSA and GCHQ by using the same methodical open source research employed by Duncan Campbell. This relationship was still very secret, and in NSA's own words, 'GCHQ was not amused.' Yet much of what Bamford revealed about sigint lay in unclassified newsletters and obscure libraries; he had only pointed to what was in plain sight. NSA concedes that Bamford's research was 'meticulous', and that he 'wrote the book' on how

to research a reclusive organisation from open sources.<sup>77</sup> Together, Duncan Campbell and James Bamford confirmed a fundamental truth: that there are no secrets, only lazy researchers.<sup>78</sup> Nevertheless, these new investigative writers were regarded as a serious threat, and one of NSA's Directors later asserted that *The Puzzle Palace* was used by the Soviet Union and China to target Western sigint operations.<sup>79</sup>

Remarkably, in 1982, even as Bamford's book came out, GCHQ was still trying to keep a lid on certain technical aspects of Ultra. Although the importance of Ultra in assisting Allied wartime strategy had now been revealed, little had been said about the dark arts of code-breaking that had been practised in Bletchley Park's Hut Six. Just as GCHQ had feared, once the general Ultra secret was out, veterans, historians and journalists rushed forward to write about code-breaking in more and more detail.<sup>80</sup> Gordon Welchman, who had been head of Hut Six, was one of these would-be authors. In 1941 he had drafted the famous plea sent to Churchill asking for more resources for Bletchley Park, to which Churchill had famously responded 'Action This Day'.<sup>81</sup> Once he had heard about Frederick Winterbotham's book *The Ultra Secret*, Welchman was burning to tell his own story, 'regardless of the Official Secrets Act'.<sup>82</sup> He went to GCHQ for a chat with two senior figures, George Goodall and Douglas Nicoll. Although they were 'very friendly', they said they had no choice but to keep to the 'party line', and told Welchman that he must not give away the 'methodological secrets' of code-breaking.<sup>83</sup>

Welchman went ahead regardless. When he finally 'sprung' his book on GCHQ in 1982, it was horrified. Entitled *The Hut Six Story*, it first appeared in the United States in order to evade censorship. Welchman continued to publish on code-breaking history, and in 1985 he wrote an article in a new journal founded by the historians Christopher Andrew and Michael Handel which would soon become the premier outlet for the new field of intelligence history. Welchman followed proper procedure and submitted his article to the D-Notice Committee, which

requested no deletions. However, a few days later he received a stiff letter from the new Director of GCHQ that spoke of the 'great shock' his book had caused at GCHQ, and claimed his writings had done 'direct damage to security' and had 'let us down'. The tone was rude at best, and caused indignation amongst veteran code-breakers.<sup>84</sup> The Welchman affair touched Bletchley Park veterans on both sides of the Atlantic: in 1985 his American friend Bill Bundy was asked to give a talk about Bletchley Park to a veterans' group of 'former cryptographic types', but NSA called him to say that 'in no circumstances' should he talk about any Hut Six techniques.<sup>85</sup>

Silly arguments about wartime secrets were soon swept away by the infamous *Spycatcher* affair. In 1985 Peter Wright, an MI5 officer who had worked closely with GCHQ's Ken Perrin on short-range sigint, published his sensational but unreliable memoirs, subtitled *The Candid Autobiography of a Senior Intelligence Officer*. The book revealed the level of paranoia about Soviet moles inside Western governments during the 1960s and 1970s, and the scale of MI5's efforts to catch them. Like Welchman, in order to get around the Official Secrets Act Wright chose to publish overseas – in Australia, where he then lived. Sir Robert Armstrong, the Cabinet Secretary, made a farcical attempt in the Australian courts to defend Prime Minister Margaret Thatcher's policy of blanket secrecy. Even now, *Spycatcher* remains the only memoir by a British intelligence officer that deals in any detail with post-war sigint. GCHQ informed NSA that it was 'upset' about Wright's book, and now considered that many aspects of sigint were 'at risk'.<sup>86</sup> Indeed, the publication of *Spycatcher* prompted GCHQ to ask Margaret Thatcher for a tougher Official Secrets Act, 'making it a crime to leak' and giving it the power to reduce the pensions of those found guilty of leaking.<sup>87</sup>

Many found this decade of revelations bewildering. In early 1974, wartime Ultra was still a secret. By 1986, the shelves of bookshops were groaning under the weight of spy books. Intelligence history – both popular and academic – had arrived

with a vengeance. Bletchley Park veterans such as Gordon Welchman, Bill Bundy and Stuart Milner-Barry were all avid readers of this new material. Milner-Barry felt obliged to read *Spycatcher*, partly because it accused so many of his former associates of being Soviet spies. Having read the book, he then purchased John Costello's *Mask of Treachery* (1988), a biography of Anthony Blunt, which he judged 'interminable'. Milner-Barry thought Costello was 'paranoiac about homosexuals who abound on every page', but he read on because there was a whole chapter devoted to John Cairncross, the 'Fifth Man', who had been in Hut Three. Oddly, Milner-Barry noted that 'Neither I nor anybody I have asked in Hut 3 can remember Cairncross at all.' He complained to his friend Bill Bundy: 'I seem to have been reading nothing but moles for weeks and I am heartily sick of them all.'<sup>88</sup>

Britain's new Prime Minister, Margaret Thatcher, was also fed up with moles. On 17 November 1979, only months after her election, she was embarrassed and angered by the unmasking of Sir Anthony Blunt, Surveyor of the Queen's Pictures, as the 'Fourth Man'. She was also incandescent with rage at the publication of *Spycatcher*. As with her predecessors Harold Macmillan and Harold Wilson, the House of Commons greatly enjoyed baiting her about these security failures. Thatcher was so exasperated by the continual spy revelations that she ordered a clampdown, even forbidding the publication of any further volumes in the government's own official intelligence history series, initiated by Burke Trend and Dick White. The final volumes, including one by the world-famous military historian Michael Howard, were suppressed for almost a decade by the same groups of secret servants that had commissioned them in the first place.<sup>89</sup> Meanwhile, Westminster and Whitehall were now plunged into a legendary period of controversy and confrontation – the Thatcher era.<sup>90</sup>

## THE 1980s

# INTO THE THATCHER ERA