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‘What did you do to them Klaus?’: The Klaus Fuchs Atomic Espionage Case and its impact on the scientific community in early Cold War Britain

The atomic spy, Klaus Fuchs, was one of the most notorious figures of the early Cold War. The story of his espionage and the impact it had on Anglo-American relations and the emerging atomic arms race has been the subject of extensive historical research. This article provides a new angle on the Fuchs case by examining the repercussions of his actions on his friends, colleagues, and the wider scientific community in Britain that have previously been overlooked. It argues that the subsequent fall-out led several atomic scientists to have their own loyalties questioned and be subjected to extensive and sustained surveillance. As the article will show, the inevitable era of suspicion that the Fuchs case ushered in did damage to the reputations, careers, and prospects of certain scientists. By examining the repercussions, the article helps to provide a first insight into the experience of some British scientists during the early years of the Cold War.

Keywords: Klaus Fuchs; atomic science; espionage; Cold War

On 1 March 1950, after a trial lasting only an hour and a half, Lord Chief Justice, Lord Goddard, summed up the case before him in the Central Criminal Court of the Old Bailey. Addressing the defendant, Klaus Fuchs, who had pleaded guilty to four charges of breaching the Official Secrets Act by ‘communicating information to a potential enemy’, the Lord Chief Justice declared,

You have betrayed not only the projects and inventions of your own brain for which this country was paying you and enabling you to live in comfort in return for your promises of secrecy. You have also betrayed the secrets of other workers in this field of science, not only in this country, but in the United States, and thereby you might

have caused the gravest suspicion to fall on those you falsely treated as friends and who were misled into trusting you.¹

Lord Goddard showed great insight in his comments. Suspicion had begun to fall on other scientists immediately after Fuchs' arrest. In the US, a Republican Senator, John Bricker, remarked, 'I've always opposed the use of foreign scientists on atomic projects. The arrest of Fuchs makes me even more certain I am right about this.'² The exposure of Fuchs' espionage arguably contributed to the rise of McCarthyism. As the intelligence historian Richard Aldrich has stated, 'it is no coincidence that Senator Joe McCarthy gave his first major speech on the dangers of communist penetration days after the arrest of Fuchs.'³

In Britain, there was not a McCarthy-style witch-hunt against individual scientists or the scientific community as a whole. Fuchs' actions did, however, lead the press, public and Security Services to raise questions about scientists; those of foreign heritage, with left-wing sympathies or who were working in the field of atomic research came under particular scrutiny. The fallout resulted in the character of some scientists being questioned and the reputations of others being damaged. The increased security measures that followed prevented some other scientists from being able to continue to work in roles which allowed them access to classified information. Fuchs' closest colleagues were subjected to extensive surveillance which continued for several years after his arrest. The Fuchs case ushered in

¹ The National Archives (hereafter TNA), KV 2/1264, serial 63b, 'Report of proceedings of FUCHS' trial before the Central Criminal Court of the Old Bailey on 1.3.50', 25.

² Norman Moss, *Klaus Fuchs: The Man Who Stole the Atom Bomb* (Sharpe Books, 2018), 193.

³ Richard J. Aldrich, *The Hidden Hand: Britain, America and Cold War Secret Intelligence* (Woodstock: The Overlook Press, 2002), 382.

For more on the experience of scientists in McCarthyite America see – Lawrence Badash, 'Science and McCarthyism', *Minerva: A Review of Science, Learning & Policy*, Vol. 38, Issue 1 (Spring 2000), 53-80; David Kaiser, 'The Atomic Secret in Red Hands? American Suspicions of Theoretical Physicists During the Early Cold War', *Representations*, Vol. 90 (Spring 2005) 28-60.

suspicion which fell on the scientific community as a whole, whilst being felt particularly acutely by certain individuals.

Fuchs had played a key role in the Manhattan Project during the war, working on the development of the atomic bomb in both New York and Los Alamos. His expertise and knowledge enabled him to pass on crucial information to the Soviet Union and this has led him to be described as ‘the most important of the British atom spies.’⁴ The current literature contains extensive material about his life and espionage; there have been five biographies written about him since the late 1980s.⁵ Fuchs’ actions had a hugely detrimental effect on Anglo-American relations and ‘led to a crisis in the Special Relationship’.⁶ In 1950, the British government led by Clement Attlee realised that, in the aftermath of the Fuchs case, they needed to prove to their American counterparts Britain’s commitment to improving security. The government moved to introduce much more intrusive security procedures in the form of positive vetting of individuals involved in atomic work.⁷ Academic works examining

⁴ Peter Hennessy, *The Secret State: Preparing for the Worst* (London: Penguin, 2010), 95.

⁵ Early books which examined Fuchs’ espionage include, Alan Moorehead’s, *The Traitors*, which was effectively sponsored by MI5, and Rebecca West’s, *The Meaning of Treason*. The first of the five biographies was published in 1987 – Robert Chadwell Williams, *Klaus Fuchs, Atom Spy* (Cambridge, MA: Harvard University Press, 1987) and followed by Moss’ *Klaus Fuchs: The Man Who Stole the Atom Bomb*; Mike Rossiter, *The Spy Who Changed the World* (London: Headline, 2015); Frank Close, *Trinity: The Treachery and Pursuit of the Most Dangerous Spy in History* (London: Penguin, 2020); Nancy Thordike Greenspan, *Atomic Spy: The Dark Lives of Klaus Fuchs* (New York: Viking, 2020)

⁶ Christopher Andrew, *The Defence of the Realm: The Authorised History of MI5* (London: Penguin, 2010), 386.

⁷ Peter Hennessy and Gail Brownfield, ‘Britain’s Cold War Security Purge: The Origins of Positive Vetting’, *Historical Journal*, Vol. 25, No. 4 (1982), 969-70.

the impact of his espionage have therefore tended to focus on one of two areas – British security vetting during the Cold War⁸ and Anglo-American relations.⁹

The current literature does not provides a specific, in-depth examination into the particular repercussions of his actions on his friends, associates, and the wider scientific community in Britain. Some reference has been given to the impact of Fuchs' espionage on Rudolf Peierls, but this has only been discussed briefly as part of works with a broader focus.¹⁰ This article, therefore, seeks to address this gap in the literature. Unlike previous accounts, it focuses on the impact of Fuchs' espionage on the lives of scientists and the wider scientific community. Drawing on the Security Service files on several of Fuchs' colleagues and acquaintances, notably Rudolf Peierls, Herbert and Erna Skinner and Boris Davison, the article examines the material effects of the fall-out of the Fuchs affair and argues that his actions adversely affected the professional lives and reputations of those individuals. The article will provide an insight into how Fuchs' actions resulted in suspicion falling upon not only these individual scientists, but also upon other elements of the scientific community. Suspicions had already been growing about some scientists in the years preceding Fuchs' arrest, but as the article will demonstrate, his exposure intensified such feelings and resulted in more extensive scrutiny of scientists by intelligence officials. In a letter from prison Fuchs wrote of his fear that his 'actions will do much harm to scientists here and in America.'¹¹ As

⁸ Hennessy and Brownfield's original article on British positive vetting, 'Britain's Cold War Security Purge' the importance of Fuchs. Andrew's authorised history of MI5, *The Defence of the Realm*, briefly covers the Fuchs case, discussing both how it led to positive vetting and also harmed Anglo-American relations.

⁹ The impact of Fuchs' espionage on Anglo-American relations has been covered most extensively by Michael Goodman in several journal articles.

¹⁰ Such as - Christoph Laucht, *Elemental Germans: Klaus Fuchs, Rudolf Peierls and the Making of British Nuclear Culture 1939-59* (Basingstoke, Palgrave Macmillan, 2012) and Close's *Trinity*. Sabine Lee has discussed the way Peierls' links with Fuchs have led to persistent allegations that he himself was a spy in an article, 'The Spy that Never Was', *Intelligence and National Security*, Vol. 17, No. 4 (2002).

¹¹ TNA, KV 2/1253, serial 558c, Fuchs to Lonsdale, 24 February 1950.

this article will show, he arguably did more damage to the reputations, careers and prospects of several atomic scientists in Britain than he could possibly have imagined.

A 'possible danger to security'?

By the time Fuchs' espionage was uncovered in 1949, elements of the British intelligence community were already becoming suspicious about other atomic scientists and had significant concerns about the security of secret information. As early as June 1945, Churchill had banned any scientist 'who had been within a whiff of the Tube Alloys project to visit the Soviet Union and risk spilling the nuclear beans.'¹² Months later, information provided by a Soviet defector in Canada revealed that Alan Nunn May, a British atomic scientist who had communist beliefs, had gained information on atomic research which he passed to the Soviets during the war. He confessed in February 1946 and was imprisoned for ten years in May 1946.¹³

The concerns of members of the intelligence community about the Nunn May case were intensified when his commitment to communism was discovered. During the war, a significant number of scientists who held similar political beliefs had been given security clearance.¹⁴ In peacetime, such individuals would have been refused clearance, but winning the war was prioritised.¹⁵ Post-war, this meant that numerous scientists recorded as having communist sympathies were working in roles which gave them access to classified information.¹⁶ The problem this created was articulated by the MI5 officer John Collard, who

¹² Graham Farmelo, *Churchill's Bomb: A hidden history of science, war and politics* (London: Faber and Faber, 2013), 297.

¹³ Andrew, *Defence of the Realm*, 345-6; TNA, KV 4/466, 11 September 1945.

¹⁴ TNA, KV 2/1811, serial 68a.

¹⁵ Greta Jones, *Science, Politics and the Cold War* (London: Routledge, 1988), 13.

¹⁶ TNA, KV 4/251, serial 61a.

wrote that Britain was left with ‘a number of individuals whose loyalty to this country in the changed circumstances of today must be considered dubious owing either to their alien origin or their political sympathies.’¹⁷ This was particularly problematic with the growing hostility between East and West, as the Soviet Union moved from being a wartime ally to a peacetime foe. At the onset of the nuclear age, with an arms race looming, security officials were conscious of the need to take decisive action to protect secret information.

In July 1946, MI5’s Deputy Director General, Guy Liddell, wrote in his diary that it would be necessary to place informants in ‘all laboratories where work on atomic work was going on’ and that they should ‘make it their business to know as much as possible about the general mode of living and political views of young scientists.’¹⁸ In the months following Nunn May’s conviction, MI5 re-examined the information they held on atomic physicists who were foreign-born or who were believed to have held far-left political views.¹⁹

Although foreign-born scientists had played a crucial role in research during the war, by 1946 their value began to be questioned. In November 1946, the MI5 officer Michael Serpell wrote that ‘whatever the value of a refugee scientist’s work may be to atomic research, his possible danger to security will be considered as a prime issue.’²⁰ For Henry Arnold, the security officer at the Atomic Energy Research Establishment (AERE), Harwell, it was necessary to doubt foreign-born men ‘since their outlook and behaviour is influenced by that hidden part of their life spent in the country of their origin, where moral and political standards differ widely from our own.’²¹ These concerns led MI5 to discuss in 1947

¹⁷ Timothy S. Gibbs, ‘British and American Counter-Intelligence and Atom Spies, 1941-1950’, PhD Thesis, University of Cambridge, 2007, 130-31.

¹⁸ TNA, KV 4/467, 10 July 1946.

¹⁹ Moss, *Klaus Fuchs*, 110; Close, *Trinity*, 174-5; Rossiter *Spy Who Changed the World*, 183-4.

²⁰ TNA, KV 2/1245, minute 49.

²¹ Close, *Trinity*, 171.

‘build[ing] up our knowledge of persons of alien connection employed at Harwell’, and even extended to other scientists who were not living in Britain.²² MI5 was asked by Commander Eric Welsh,²³ an MI6 officer specialising in atomic intelligence, to notify him when any foreign scientists connected with atomic research visited the United Kingdom.²⁴

Despite the fact that staff at Harwell had previously received security clearance, Arnold continued to be sceptical about their loyalty. In late 1946, he communicated concerns about Fuchs to MI5, and the scientist was placed under surveillance for several months from January 1947. Since Fuchs had temporarily ceased contact with his Soviet handlers, his espionage, however, remained undetected.²⁵ Although Fuchs’ activities may not have been exposed, Arnold’s investigations at Harwell did uncover communist connections amongst several junior researchers at the establishment. In late March 1948, Chapman Pincher reported in the *Daily Express* that three scientists at Harwell had been identified by MI5 as being or having been members of the Communist Party.²⁶ By May, three junior researchers were sacked from the atomic research establishment because of their communist connections.²⁷

By the late 1940s, security officials were not merely concerned about atomic scientists, but were also uneasy about elements of the wider scientific community. One official from the Ministry of Defence posited in 1947 that physicists who had previously held far-left views had toned them down, but that ‘scientists other than physicists are said to be as

²² TNA, KV 2/2758, minute 17.

²³ Michael S. Goodman, ‘MI6’s Atomic Man: The Rise and Fall of Commander Eric Welsh’, *War in History*, Vol. 23, No. 1 (January 2016), 107.

²⁴ TNA, KV 2/2589, minute 36, serial 38a.

²⁵ Greenspan, *Atomic Spy*, 206-8.

²⁶ ‘Atom Men on Purge List’, *Daily Express*, 23 March 1948.

²⁷ Close, *Trinity*, 198-9; Greenspan, *Atomic Spy*, 184.

It is unclear if those dismissed were the same individuals that Pincher had referenced weeks earlier.

red as ever they were.’²⁸ A growing strand of left-wing scientific thought had developed in the 1930s, with non-physicist communists such as J.D. Bernal, J.B.S. Haldane, Lancelot Hogben and Joseph Needham gaining prominence.²⁹ During the war, significant elements of the scientific community had moved to the left; by the time of the 1945 General Election, it was said that four in five scientists were prepared to vote for the Labour Party.³⁰

Post-war, MI5 believed that many scientists ‘feel [they have] a larger role than pure scientific research.’³¹ With the nuclear age in its infancy, many scientists felt it essential to speak out and put forward their informed opinions in the immediate post-war years. Two of the largest forums, where scientists could debate these issues were the Association of Scientific Workers (AScW) and the Atomic Scientists Association (ASA). Having communists amongst their members, both saw their office phones tapped by MI5.³² The concerns that grew in the scientific community post-war, about the future use of nuclear weapons, were not, however, confined to scientists of one particular political ideology. Fears were expressed by men representing all political persuasions.³³ The fact that the loudest voices were those of scientists on the left and scientific organisations that had links to

²⁸ TNA, KV 2/1811, serial 145b.

²⁹ For much more on the men and their backgrounds see – Gary Werskey, *The Visible College: A Collective Biography of British Scientists and Socialists of the 1930s* (London: Allen Lane, 1978)

³⁰ Werskey, *Visible College*, 266; Jennifer Rose Goodare, ‘Representing Science in a Divided World: The Royal Society and Cold War Britain’, PhD Thesis, University of Manchester, 2013, 53.

³¹ TNA, KV 2/3030, serial 21a.

³² Jones, *Science, Politics and the Cold War*, 8, 48-9, 93; Laucht, *Elemental Germans*, 131, 137, 142-44; TNA, KV 2/1658, minute 36; TNA, KV 2/3217, serial 61z; Farmelo, *Churchill’s Bomb*, 351, 364; Laucht, *Elemental Germans*, 131, 137; Close, *Trinity*, 182-3, 392-3.

By 1955, the AScW was under extensive surveillance as it was considered to have been ‘heavily penetrated by the Communist Party’ (TNA, KV 2/3237, serial 384a).

³³ See – Goodare, 82-3.

communism, may have given intelligence officials the impression that science had begun to be dominated by left-wing, possibly even communist, thinking.

Despite there being little concrete evidence to support the growing concern of intelligence officials about the scientific community in the years immediately following World War II, a feeling of unease had undoubtedly developed. Doubts were most notably prompted by the fact that significant elements of the scientific community were of foreign heritage, on the left politically or both. By the time Fuchs' espionage came to light in 1949, therefore, the suspicions of intelligence officials that had been simmering for several years were suddenly crystallised. Fuchs gave officials a tangible reason to act upon their misgivings and led them to investigate scientists to a much greater extent.

The coils of suspicion

The repercussions of Fuchs' espionage began soon after his confession. The day news of his arrest became public, 3 February 1950, MI5 applied for Home Office Warrants (HOWs) to intercept the communications of several scientists involved in atomic research.³⁴ MI5 internal documents stated, 'when the arrest of Dr Fuchs was made public, it was decided to give as much coverage as we could afford for a strictly limited period on certain scientists in order to ascertain their reactions'.³⁵

The Security Service also closely observed Fuchs' friends and associates to gauge their reaction at the time of his arrest. One of those who was subject to a HOW at this time was Professor Rudolf Peierls, then working at Birmingham University.³⁶ Peierls, a German-Jewish refugee physicist, who was naturalised British in 1940, was a key figure in early

³⁴ TNA, KV 2/3218, serial 158a; KV 2/3228, serial 38a; KV 2/2884, serial 96a, serial 98a.

³⁵ TNA, KV 2/3218, serial 161a; TNA, KV 2/2885, serial 119a.

³⁶ TNA, KV 2/1661, serial 225a, serial 226a.

atomic research.³⁷ He recruited Fuchs to join his team in Birmingham working on the British atomic bomb project, Tube Alloys.³⁸ Fuchs was given security clearance to join the project despite MI5 concerns, with Peierls vouching for his trustworthiness.³⁹ In Birmingham, Fuchs lodged with the Peierls family, with whom he developed a close relationship.⁴⁰

Fuchs and Peierls moved to work in the United States as part of the Manhattan project in 1943. After the war, Peierls returned to Birmingham University, whilst Fuchs eventually moved to Harwell. The Security Service already held a record on Peierls as a result of providing him with security clearance for his wartime work. In 1946, however, they placed him under greater scrutiny - a probe triggered by their first, unsuccessful, investigation into Fuchs. They found nothing of interest from a security point of view against Peierls other than the fact he had a Russian wife and had visited the country in 1937.⁴¹ Nonetheless, in January 1947, a HOW was taken out to intercept letters sent to him at Birmingham University. It was, however, cancelled in May after producing nothing of interest.⁴²

The Security Service began a further investigation into Peierls in 1949 after receiving information that a member of the British research contingent in the USA, codenamed REST and later CHARLES, had passed documents to the Soviets in 1944. MI5 quickly identified Fuchs and Peierls as the prime suspects and took out telephone and mail intercepts on both.⁴³ Despite the fact that Fuchs was considered most likely to be CHARLES, the Security Service

³⁷ Sabine Lee, 'Sir Rudolf Ernst Peierls', *Biographical Memoirs of Fellows of the Royal Society*, Vol. 53 (2007) 267, 274; Farmelo, 136-45; Moss, 29-33.

³⁸ Farmelo, 180; Close, *Trinity*, 21, 87.

³⁹ TNA, KV 2/1245, serial 8; Close, *Trinity*, 77-81.

⁴⁰ Rudolf Peierls, *Bird of Passage: Recollections of a Physicist* (Princeton: Princeton University Press, 2014), 163.

⁴¹ TNA, KV 2/1658, serial 21a.

⁴² TNA, KV 2/1658, serial 42a.

⁴³ TNA, KV 4/471, 9 August 1949, 8 November 1949; Greenspan, 201-2, 225-6, 235-6; TNA, KV 2/1246, serial 214a; TNA, KV 2/1658, serial 62a.

still investigated Peierls.⁴⁴ Only years later did Peierls come to realise the extent of the scrutiny he had been under towards the end of 1949. In his memoirs he wrote, ‘I must therefore have been under great suspicion for a time, but at no stage was I made to feel it.’⁴⁵

After Fuchs had been arrested in February 1950, Rudolf Peierls was heard, as a result of the MI5 tap on his telephone, relaying the news to his wife, Genia. She questioned if her husband was ‘in the same danger yourself.’⁴⁶ Although Rudolf dismissed her fears, both Peierlses realised that suspicions would fall on other members of the scientific community in the wake of Fuchs’ actions.

Rudolf visited Fuchs in custody, whilst Genia sent him a letter making clear both her sorrow and anger. She wrote,

Do you not realise the effect of your trial on scientists here and in America? Specially in America where many of them are in difficulties already. Do you realise that they will be suspected not only by officials but by their own friends, because if you could, why not they...

What did you do to them Klaus? Not only that their faith in decency and humanity is shaken, but for years to come, they will be suspected of being involved in this with you. Perhaps you did not think about it at the time, but you must think now.⁴⁷

⁴⁴ TNA, KV 2/1246, serial 175e, ‘Investigation into the activities of Emil Julius Klaus FUCHS’, Appendix ‘B’.

⁴⁵ Peierls, *Bird of Passage*, 225.

⁴⁶ TNA, KV 2/1251, serial 478d.

⁴⁷ TNA, KV 2/1661, serial 231a.

The letter, described in his diary by MI5's Deputy Director General Guy Liddell as 'first class',⁴⁸ correctly anticipated that the scientific community was going to be under more suspicion than ever in both Britain and the US. Genia Peierls would not have known at the time, but her husband was one of the scientists who had been placed under the most intensive investigations and had been suspected of espionage.

The material effect of Fuchs' espionage on those who had been close to him became clear only days after his arrest. At Harwell, Fuchs had been particularly close with his boss, the head of physics, Herbert Skinner, and his wife, Erna. Erna was, at one stage, Fuchs' mistress, and he appears to have confessed to her about his espionage before he told the Security Service.⁴⁹ Fuchs was so often present at the Skinners' Harwell household, that their teenage daughter, Elaine, began to resent his presence.⁵⁰ On 8 February 1950, Erna Skinner received a telegram from her father who was living in New York, telling her that he was very ill and wished for her and Herbert to visit.⁵¹ MI5 officials were very concerned about the trip, describing it in private as 'in the highest degree undesirable' and used Arnold to pressurise Herbert Skinner to abandon the trip.⁵² Fuchs was made aware of this when the Skinners visited him in Brixton Prison, demonstrating to him, for the first time, the detrimental effect of his actions on the day-to-day lives of those to whom he was closest.

The impact of Fuchs' actions on the Skinners was not confined to preventing their visiting Erna's father, but also resulted in the sustained surveillance of them. The Skinners had never previously come to MI5's attention, but in September 1949 when the Security Service began investigating Fuchs, a file was opened on them and their phone was tapped in

⁴⁸ TNA, KV 4/472, 7 February 1950.

⁴⁹ TNA, KV 2/2081, minute 60; TNA, KV 2/1251, serial 478b; Rossiter, 301; Close, *Trinity*, 244, 287, 411-12.

⁵⁰ Moss, *Klaus Fuchs*, 114.

⁵¹ TNA, KV 2/1251, serial 480a; TNA, KV 2/2080, serial 1za.

⁵² TNA, KV 2/2080, serial 486a; TNA, KV 2/2080, serial 1zc.

the hope of learning more about Fuchs.⁵³ Intelligence officials continued to watch the couple closely for many months after Fuchs' conviction, despite not having uncovered any incriminating evidence against them. MI5 was particularly concerned about Erna, in part because of her relationship with Fuchs, but also because of both her German-Austrian origin and her having a number of left-wing friends.⁵⁴ In July 1950 James Robertson of MI5 made an assessment of the Skinners. He wrote,

Since the SKINNER's, on their own admission, have Communist friends, they may share these friends views, and that Professor SKINNER's [move] from Harwell to Liverpool University should not therefore be a ground for the Security Service ceasing to pay them attention. I suggested, for example, as one possible measure, that enquiries should be made periodically through sources in the University, as to whether or not they continue to have associations with Communists, and if so with whom; also that an occasional visit from a member of the Security Service might have a salutary deterrent effect.⁵⁵

Despite these concerns, Herbert Skinner was allowed to continue as a consultant at Harwell, and was not, himself, considered to represent a security risk. Vetting reports did, however, state that 'some slight element of risk must be deemed to be attached to Mrs SKINNER' on account of her communist friends.⁵⁶ MI5 kept a file on the Skinners until at least 1953.

Herbert Skinner was not the only colleague of Fuchs at Harwell who felt the pressure in the weeks and months following Fuchs' arrest. Members of the scientific community

⁵³ TNA, KV 2/1246, serial 185a; TNA, KV 2/1248, serial 344a.

⁵⁴ TNA, KV 2/2080, serial 1a; TNA, KV 2/1247, serial 196a.

⁵⁵ TNA, KV 2/2080, minute 8.

⁵⁶ TNA, KV 2/2080, minute 13, serial 52a.

became suspicious of each other. Professor Brian Flowers, who eventually succeeded Fuchs as head of Harwell's theoretical division, spoke of how the case was a 'dreadful morale breaker.'⁵⁷ The wife of one AERE employee later wrote that following Fuchs' arrest,

there were a series of "purges" in Harwell. Security was tightened to an extent that nearly amounted to panic. Anyone with the smallest suspicion of Communist activities in their past lives was under scrutiny, and all those vulnerable to blackmail, or with a secret to hide, came into the category classed as "unreliable". If one had ever been seen reading a copy of the "Daily Worker", it seemed one was to be marked for life.⁵⁸

Members of the theoretical division were rigorously investigated; some were transferred to administrative jobs and others left Harwell permanently.⁵⁹ Fuchs' actions also impacted on the morale of his former wartime colleagues. Norris Bradbury, who had worked alongside Fuchs at Los Alamos, perhaps best articulated the effect of his actions, saying 'For the first time Fuchs raised the question among the scientists, "Who can you trust?" We felt as if we'd all been betrayed.'⁶⁰ A member of the British team in wartime America, Frank Kearton, simply described 1950 as 'the worst time in my life.'⁶¹

⁵⁷ Michael S. Goodman, *Spying on the Nuclear Bear: Anglo-American Intelligence and the Nuclear Bomb* (Stanford: Stanford University Press, 2007), 66.

⁵⁸ Mary Flowers, *Atomic Spice: A Partial Autobiography*, (Unpublished, 2009), 136. accessed at: <https://homepages.inf.ed.ac.uk/opb/atomicspice/atomicspice.pdf>

⁵⁹ Greenspan, *Atomic Spy*, 278, 287.

⁶⁰ Laucht, *Elemental Germans*, 112.

⁶¹ Greenspan, *Atomic Spy*, 278.

Kearton had himself been investigated in 1949. See - Rossiter, 280-1; Greenspan, *Atomic Spy*, 201-2, 235-6.

The flight of Bruno Pontecorvo

One of the most important repercussions of Fuchs' espionage was the introduction of stronger security measures and investigations into individuals working in the atomic energy field.

Shortly after Fuchs' conviction, on 5 April 1950, Clement Attlee took the first steps to strengthen security by establishing a Committee on Positive Vetting.⁶² The Committee was tasked with considering the 'risks and advantages' of a more rigorous vetting system that would apply to a limited number of public service posts 'where the presence of an untrustworthy person would involve exceptionally serious danger to the security of the State.'⁶³ Its main concern was to ensure that individuals with 'access to cosmic [nuclear] documents' were beyond reproach. In order to do so, it recommended that more substantial investigations – Positive Vetting – should be undertaken into the reliability of individuals in around 1,000 posts.⁶⁴ These recommendations were accepted by Attlee's Committee on Subversive Activities on 13 November 1950.⁶⁵

Some weeks before the Committee on Positive Vetting finally reported, Henry Arnold informed MI5 on 26 September 1950 that Bruno Pontecorvo, an Italian-born British physicist working at Harwell, had failed to return after a holiday and was missing.⁶⁶ Unbeknownst to security officials, Pontecorvo had defected to the Soviet Union, although this was not made public by the Soviets until 1955.⁶⁷ At the time of Pontecorvo's defection, British authorities

⁶² TNA, CAB 130/20/GEN183, Committee on Subversive Activities, 5th Meeting, 5 April 1950; Hennessy, *Secret State*, 95-6; Andrew, *Defence of the Realm*, 387.

⁶³ TNA, CAB 130/20/GEN183, GEN 183/8, Committee on Positive Vetting Report, 27 October 1950

⁶⁴ Hennessy, *Secret State*, 98; TNA, CAB 130/20/GEN183, GEN 183/8, Committee on Positive Vetting Report, 27 October 1950.

⁶⁵ TNA, CAB 130/20/GEN183, 6th Meeting, 13 November 1950.

⁶⁶ Andrew, *Defence of the Realm*, 389; TNA, KV 2/1887, serial 40a.

⁶⁷ Frank Close, *Half Life: The Divided Life of Bruno Pontecorvo, Physicist or Spy* (London: Oneworld, 2015), xvi.

played down his significance.⁶⁸ However, he had been an important figure in the West's nuclear research establishment, and has subsequently been described as a 'rare genius.'⁶⁹ Prior to joining Harwell in 1949, he worked as part of the Tube Alloys team in Montreal during the war, and was naturalised as a British subject in 1948.⁷⁰

The Security Service had begun to take a significant interest in Pontecorvo weeks after Fuchs' arrest. On 1 March 1950, Pontecorvo revealed to Henry Arnold that his brother was a communist.⁷¹ At around the same time, MI5 received information from a source in Sweden that Pontecorvo and his wife were 'avowed communists.'⁷² Whilst MI5 were unable to verify the accuracy of the report, Arnold had a further conversation with Pontecorvo at the beginning of April 1950. During their discussion, Pontecorvo stated, untruthfully, that neither he nor his wife were communists, but he disclosed that two of his sisters were sympathetic to communism.⁷³ It was subsequently acknowledged by both Arnold and Pontecorvo that he might therefore pose a security risk and should not continue to work at Harwell. Plans were put in place for him to take up an academic post at Liverpool University.⁷⁴

Clear evidence of Pontecorvo's own communist sympathies only came to light after he had fled. In 1942, the FBI had searched Pontecorvo's residence in Tulsa, Oklahoma,

⁶⁸ TNA, PREM 8/1273, 'Note on Captain Liddell's interview with the Prime Minister on 23.10.50; Parliamentary Debates (Commons), 478, 23 October 1950, 2488-92.

⁶⁹ Simone Turchetti, *The Pontecorvo Affair: A Cold War defection and Nuclear Physics* (Chicago; London: University of Chicago Press, 2012), 40; Close, *Trinity*, 424.

⁷⁰ Simone Turchetti, 'Atomic Secrets and governmental lies: nuclear science, politics and security in the Pontecorvo case', *British Journal for the History of Science*, Vol. 36, Issue 4 (December 2003), 395-8; Close, *Half Life*, 88-9, 120.

⁷¹ TNA, KV 2/1887, serial 20a; TNA, KV 2/1889, serial 139a

⁷² TNA, KV 2/1887, serial 21a

⁷³ TNA, KV 2/1887, serial 26a; Close, *Half Life*, 31-3, 47-9.

⁷⁴ TNA, KV 2/1887, serial 63a; TNA, KV 2/1888, serial 97c; TNA, KV 2/1889, serial 170a; Turchetti, *Pontecorvo Affair*, 88-92.

because he was an enemy alien. During the search ‘numerous pamphlets and books on Communism’ were discovered.⁷⁵ Whilst this information was passed on to the British Security Coordination (BSC)⁷⁶ at the time, apparent administrative errors meant that these details did not reach MI5 until July 1950. As it had been decided that Pontecorvo would be moving to Liverpool, no further action was taken.⁷⁷

With the evidence of his communist sympathies and his defection it may, at first, appear clear-cut that Pontecorvo was an atomic spy who had fled before he was uncovered. This is certainly the way in which the case was portrayed at the time and has often been since.⁷⁸ However, in his rigorous biography of Pontecorvo, *Half Life*, Frank Close convincingly raises doubts on this narrative. Although he does not go as far as to argue that Pontecorvo was not a spy, acknowledging elements of his behaviour that suggest he may well have been, Close demonstrates that there has never been any evidence that Pontecorvo passed information to the Soviets prior to his defection. Neither MI5 nor the FBI ever found any conclusive evidence against him and Pontecorvo himself never admitted to having been involved in espionage.⁷⁹

Although it is unclear whether Pontecorvo himself was involved in espionage, it does seem clear that his decision to defect was heavily influenced by the revelation of Fuchs’ espionage.⁸⁰ Pressure had been placed on Pontecorvo after the exposure of Fuchs. He had

⁷⁵ TNA, KV 2/1887, serial 61a; TNA, KV 2/1888, serial 112a.

⁷⁶ For more on the BSC see - Turchetti, ‘Atomic secrets’, 412.

⁷⁷ TNA, PREM 8/1273, ‘Action taken by the Security Service in connection with the Pontecorvo Case’; TNA, KV 2/1887, serial 71a.

For more on why the information did not reach MI5 in 1943 see – Close, *Half Life*, 190-92, 204-7; Turchetti, *Pontecorvo Affair*, 74-9.

⁷⁸ Turchetti, ‘Atomic Secrets’, 411-12.

⁷⁹ For more on the doubts about Pontecorvo’s involvement in espionage see - Close, *Half Life*, 130-31, 303-14; Turchetti, *Pontecorvo Affair*, 201-17.

⁸⁰ Close, *Trinity*, 301, 372.

seen colleagues abroad face increasing scrutiny and ‘began to fear that the tentacles of McCarthyism’ were coming to Europe.⁸¹ Pontecorvo later claimed that his defection had been prompted by ‘the witch-hunts and the pressure put on him by security services during vetting’ – both of which were repercussions of Fuchs’ unmasking.⁸² Whilst Pontecorvo’s defection may have bolstered the argument for increased security measures it should not be seen as greatly influencing the introduction of Positive Vetting weeks later. The Committee on Positive Vetting had already been working for several months and it seems likely that such restrictions would have been introduced regardless of Pontecorvo’s actions. Fuchs’ espionage had set in motion a process to greatly tighten security and restrict the activity of some scientists. The repercussions resulting from Pontecorvo defection - greater suspicion about and more significant surveillance of various scientists - should, therefore, be traced back to Fuchs.

‘Perturbed Men’

In the days and weeks that followed the publicising of Pontecorvo’s defection, a spotlight was placed upon the scientific community, and in particular foreign-born scientists. Newspapers, most notably the *Daily Express*, published several stories which gave the impression that some atomic scientists were security risks. In the first three weeks after Pontecorvo’s flight became public knowledge, the *Express* reported that several individuals who had been active CPGB members were working in government labs, that an engineer at the Ministry of Supply’s Rocket Propulsion Department had been suspended because of alleged communist associations, and that a privately owned atomic and rocket research

⁸¹ Close, *Half Life*, 157; Turchetti, ‘Atomic Secrets’, 404-5; Turchetti, *Pontecorvo Affair*, 215.

⁸² Turchetti, ‘Atomic Secrets’, 414.

For the debate about what triggered Pontecorvo’s defection see - Close, *Half Life*, chapter 13 and 171-2, 310-12; Turchetti, *Pontecorvo Affair*, 112-17.

laboratory had denied employees, including those of foreign heritage or communist sympathies, from accessing the lab.⁸³

The coverage in the *Daily Mirror* tended to focus on scientists who were foreign born. One report suggested many scientists of foreign heritage had voluntarily given up their passports to assure the authorities of their loyalty and that ‘after the discovery of...Fuchs...the large number of foreign scientists here have been constantly worried.’⁸⁴ In another article, a *Mirror* journalist, after raising the names of Fuchs and Pontecorvo, questioned ‘is the price of British citizenship too cheap?’ and argued that foreigners should have to ‘prove their innocence’ before they be granted British citizenship.⁸⁵

Questions about foreign-born scientists were raised in several other publications, often by members of the public. The right-wing publication *Truth* published letters which asked why foreign-born scientists should be entrusted with our most precious secrets.⁸⁶ In early November 1950, the *Daily Herald*, reported from the village Harwell, and interviewed locals. One woman, a Miss Drewett, questioned ‘why can’t decent English scientists do this atomic lark by themselves’ and suggested that foreigners were ‘practically queuing up to steal our secrets.’⁸⁷ Such questions were not confined to the press or the public, but were also raised in Parliament, albeit more subtly. The Minister of Supply was asked in the Commons ‘how many of the staff at Harwell are naturalised citizens of alien birth?’⁸⁸, whilst in the House of Lords, the matter was debated extensively. Lord Teviot suggested that Britain had

⁸³ ‘Ex-Reds at Work on Secrets’, *Daily Express*, 28 October 1950, 1; ‘Rocket Man Suspended’, *Daily Express*, 16 November 1950, 1; ‘Guard Over Secrets Lab’, *Daily Express*, 6 November 1950, 1; ‘Reds In Secrets Lab’, *Daily Express*, 8 November 1950, 1.

⁸⁴ ‘Atom Men Give Up Their Passports to Prove Loyalty’, *Daily Mirror*, 26 October 1950, 1.

⁸⁵ ‘Is the price of British citizenship too cheap?’, *Daily Mirror*, 27 October 1950, 2.

⁸⁶ ‘To the Editor’, *Truth*, 10 November 1950, 501.

⁸⁷ ‘Harwell: It’s having an atomic war of its own’, *Daily Herald*, 6 November 1950, 4.

⁸⁸ Parliamentary Debates (Commons), 480, 6 November 1950, 565.

been ‘too easy going in this matter of the employment of foreigners and ex-enemy aliens’ and advocated dispensing of all scientists ‘who are of ex-enemy origin.’⁸⁹ Lord Vansittart argued that there was a need to tighten rules which allowed foreign-born individuals to become naturalised British citizens and requested that the names of the individuals who had sponsored Fuchs and Pontecorvo’s naturalisations be named.⁹⁰

The attacks on foreign-born scientists were so extensive that the *Sunday Express* published an article on its front page on 29 October 1950 with a headline ‘Perturbed Men’. Underneath the main headline, the front page featured the pictures of six atomic scientists, and whilst the story did not accuse them of doing anything wrong, it exposed these individuals to the full public glare. Carrying no attributable quotes, the *Sunday Express* story stated that a number of men had been ‘profoundly disturbed by the disappearance of Professor Bruno Pontecorvo’ and that ‘many of them feel that the British Government should issue a statement testifying to their loyalty.’ The article reiterated what had been reported in the *Daily Mirror* days earlier and suggested that some foreign-born scientists had considered surrendering their British passports as a token of their loyalty.⁹¹ Rudolf Peierls, one of those featured on the front page, however, objected to his portrayal as being ‘perturbed.’ Uncharacteristically, he decided to respond and wrote to the *Sunday Express*, ‘I for one am not perturbed’. He argued that he had a belief in the ‘fairness, justice and steadiness of public opinion’ and thus was sure that the British public would ‘not get worked up over loose suspicions or unfounded accusations.’⁹² The letter was published in the *Sunday Express* on 12 November 1950, two weeks after the original article.

⁸⁹ Parliamentary Debates (Lords), 169, 22 November 1950, 456-8.

⁹⁰ Parliamentary Debates (Lords), 169, 13 December 1950, 932-36.

⁹¹ ‘Perturbed Men’, *Sunday Express*, 29 October 1950, 1, 7.

⁹² ‘To a Just, Fair and Steady Britain’, *Sunday Express*, 12 November 1950, 4; Peierls, *Bird of Passage*, 225; Lee, ‘The Spy that Never Was’, 95.

Although Peierls' may have disputed the article, there were still reasons for some men to be 'perturbed.' MI5 documents show that the Security Service held files on each of the men pictured on the front page, whilst the press questioned scientists' loyalty.⁹³ In the *Express*, Chapman Pincher stated that 'ex-foreigners are more likely to prove treacherous than native-born folk.'⁹⁴ For some men and their families the pressure of the scrutiny was unrelenting, and they felt that their background placed a target on their back. The wife of one foreign-born scientist, who had engaged in secret work during the war, commented many years later, 'I was secretly pleased when Burgess and Maclean and Philby turned out to be spies. They were not foreign, they were not Jewish, they were true-blue British and had been to the best schools and to Cambridge.'⁹⁵

'Incline in favour of the State rather than the Individual'

After the story about Pontecorvo broke the media storm was initially severe, though it died down within several weeks. In private, however, Whitehall and security officials continued work to introduce stronger security measures that would directly impact atomic scientists. Positive Vetting was formally approved by the Cabinet Committee on Subversive Activities, whilst Lord Portal, Controller of Production (Atomic Energy) at the Ministry of Supply, sought to impose restrictions on the movement of those with access to secret information.⁹⁶ In November 1950, building on these proposals, a meeting of the Directors of Intelligence made clear the need for some method 'to prevent British subjects or aliens with important

⁹³ See – TNA, KV 2/2421, serial 56a, 'Copies in:'

⁹⁴ 'MI5: While secrets are sold at embassy doors, the 7 men can't protect us', *Daily Express*, 10 November 1950, 4.

⁹⁵ Moss, *Klaus Fuchs*, 235, footnote xix.

⁹⁶ TNA, KV 4/472, 27 October 1950; Close, *Half Life*, 119.

defence knowledge from travelling at least without permission.’⁹⁷ Such action was already being undertaken in the US, and the FBI was urging Britain to do the same.⁹⁸

In July 1951, the passport of an atomic scientist, Eric Burhop, was cancelled shortly before he was due to travel as part of a delegation to the Soviet Union. This case produced extensive press coverage and questions in Parliament.⁹⁹ The publication of the Atomic Scientists Association, *Atomic Scientists’ News*, argued that ‘the procedure adopted by the government is a matter of very great concern to all scientists in this country.’¹⁰⁰ The case was eventually resolved with Burhop receiving a new passport on the condition that he would consult with the Foreign Office if he ever intended to travel to a Soviet-bloc country in the future.¹⁰¹

The return of Burhop’s passport did not signify that the authorities’ concerns had been allayed and in the years that followed, officials continued to be concerned about scientists travelling abroad. In early 1953, the Foreign Office withdrew an invitation it had extended to C.F. Powell, Professor of Physics at Bristol University, to give a series of lectures at German Universities because of his association with the British Peace movement.¹⁰² The case led the *Atomic Scientists’ News* to state in an editorial, ‘such is the temper of the times that any physicist travelling abroad is liable to become the subject of interrogations by the press.’¹⁰³

In 1954 the Security Service was informed by Eric Welsh of MI6 that Otto Frisch, Professor at Cambridge University and consultant to Harwell, was travelling to Austria - ‘I

⁹⁷ TNA, KV 4/472, 9 November 1950.

⁹⁸ Turchetti, ‘Atomic secrets’, 409.

⁹⁹ Parliamentary Debates (Commons), 491, 25 July 1951, 449-54.

¹⁰⁰ ‘Freedom in Science’, *Atomic Scientists’ News*, Vol. 1 No. 1 (Sept 1951), 2.

¹⁰¹ See – TNA, KV 2/3229 to KV 2/3232.

¹⁰² ‘Prof. Powell’s Lecture Tour’, *The Times*, 7 January 1953, 5.

¹⁰³ *Atomic Scientists News*, Vol. 2. No. 5 (May 1953), 289.

think...that someone in Security should have this information on file in case of an accident.’¹⁰⁴ The Security Service could take little action, however, as the Austrian-born Frisch was a naturalised British subject and thus ‘cannot be prevented from leaving this country.’ It was noted that, ‘there seems no reason to think he might be another Pontecorvo, but even if he were, I don’t see what we could do about it short of asking SIS to keep him under observation in Austria.’¹⁰⁵ The case amounted to nothing but exemplified the apprehension about the scientific community.

The fallout from the Fuchs and Pontecorvo cases made officials much more reluctant to accept the employment of individuals about whom they had even minor concerns. Lord Portal made clear that there was a need ‘to get rid of anyone who is tainted’ working within the atomic energy field with only one month’s notice.¹⁰⁶ Subsequent investigations at Harwell revealed that eighteen members of staff had ‘some sort of a Communist suspicion attaching to them’. The suspicion about five staff was sufficiently serious for their continued employment to be put at risk. Around the same time, MI5 also noted that investigations had revealed that 100 people of alien origin were working in key posts at the Ministry of Supply and the Admiralty. The Security Service therefore asked the respective departments to conduct further investigations into these people.¹⁰⁷

Officials also began to evaluate the security risks posed by consultants at Harwell, including Rudolf Peierls who, once again, was subjected to an extensive MI5 investigation. Whilst the Security Service thought it unlikely that Peierls had ever been, or would ever be, involved in espionage and believed he was loyal, intelligence officials still questioned his

¹⁰⁴ TNA, KV 2/2421, serial 77a.

¹⁰⁵ TNA, KV 2/2421, minute 79.

¹⁰⁶ TNA, KV 4/472, 27 October 1950.

¹⁰⁷ TNA, KV 2/2579, serial 134a.

continuing consultancy at Harwell, suggesting that it might be best for all if he left his position.¹⁰⁸ They expressed concern that several Peierls' friends and associates were either known communists or sympathetic to communism, whilst also worrying that his continued relationship with Harwell would lead to questions from the Americans.¹⁰⁹ One MI5 officer noted that the Americans 'are inclined to suspect PEIERLS of being a bad security risk – a fact which...might be borne in mind if his work as a consultant gives him access to Anglo-American secrets.'¹¹⁰

Initially, Peierls was allowed to continue in his role at Harwell, and the Security Service provided a vetting report enabling him to travel to a conference in Chicago after he had been previously been refused a visa request by the American authorities.¹¹¹ In 1957, however, when his consultancy at Harwell was due to be renewed, he received a letter informing him that 'for reasons of administrative convenience [he] would no longer be able to see classified documents'. Whilst at the time Peierls was told this was routine procedure for consultants whose contracts needed renewing, he later discovered that the ruling had resulted from American concerns about his access to classified information. He subsequently resigned from his consultancy, believing that he 'did not have the full confidence of Harwell.'¹¹²

Security officials were willing to sacrifice Peierls for the good of Anglo-American relations even though it was known that the American concerns against Peierls were not

¹⁰⁸ TNA, KV 2/1661, serial 270a.

¹⁰⁹ TNA, KV 2/1661, serial 262a, serial 276a.

¹¹⁰ TNA, KV 2/1661, serial 274a; KV 2/1662, serial 288a, serial 299a.

¹¹¹ TNA, KV 2/1662, serial 323a, serial 324b, serial 324c, minute 324, serial 327a; Peierls, *Bird of Passage*, 321-2; Gibbs, 305.

¹¹² Peierls, *Bird of Passage*, 324.

based on any evidence, and that MI5 themselves judged him not to be a security risk. This was articulated by a note in Peierls' MI5 file,

We...may face definite risks of embarrassment with the Americans if PEIERLS should be admitted to the atomic weapons field...the FBI is by no means satisfied that PEIERLS' connection with FUCHS was innocent...their proclivity for seeing security risks in terms of black and white will tend to place PEIERLS among the blacks.¹¹³

Once American concerns had decreased, Peierls was approached to resume his consultancy in 1960. Whilst he rejected the approach, he eventually returned to Harwell in 1963.¹¹⁴ The stigma caused by his friendship with Fuchs had remained with him for a considerable amount of time, although his reputation largely recovered, and he was later Knighted.

Whilst Peierls was required to leave Harwell for several years, he was, however, able to continue in his primary role - leading the theoretical physics department at Birmingham University - without any problems. Unlike Peierls, many other scientists were not so fortunate in the years that followed Fuchs' conviction and had to leave their principal jobs. The effect on those working at Harwell in the years that followed the exposure of Fuchs is perhaps most clearly demonstrated by the case of Boris Davison, a Principal Scientific Officer at the establishment.

Although a British national, Davison had been brought up in Russia by parents who were still living in the Soviet Union. He had also studied at Leningrad University.¹¹⁵ During the war, he had worked under Peierls on the Tube Alloys project at Birmingham. In 1945 he

¹¹³ TNA, KV 2/1663, serial 355a.

¹¹⁴ Lee, 'The spy that never was', 90; Peierls, *Bird of Passage*, 324.

¹¹⁵ Peierls, *Bird of Passage*, 175; TNA, KV 2/2579, minute 6.

moved to Canada to work on the atomic energy project and spent a number of weeks working at Los Alamos.¹¹⁶

After returning to the UK in 1947, Davison took up his post at Harwell and underwent the required vetting procedures, with no evidence found to prevent him from being given security clearance.¹¹⁷ In September 1949, shortly after Fuchs' espionage had been uncovered, MI5 again investigated Davison, 'in view of the current enquiry into security at Harwell'. He was subject to a warrant to intercept his post for the next twelve months. Since MI5 found nothing incriminating, they ceased to investigate him.¹¹⁸

In late 1950, MI5 again returned to the Davison case. As his parents still lived in Russia, Director General, Sir Percy Sillitoe, expressed concern that the Soviets may 'bring pressure to bear upon Davison, with the object of persuading him either to disclose secret information or to place his services at their disposal in Soviet-controlled territory.'¹¹⁹ Due to these concerns, in January 1951, Prime Minister Clement Attlee was informed about the case after he had asked to be made aware of any individuals 'holding positions of great importance about whom there were unusual security doubts.' Such was Davison's importance to the work of Harwell, Attlee concluded that he should be allowed to continue in his position and personally accepted 'the responsibility for any such political consequences'.¹²⁰

Despite Attlee's judgement, MI5 continued to scrutinise Davison extensively throughout 1951. A warrant was again issued to check his mail, and MI5 questioned his

¹¹⁶ TNA, KV 2/2579, serial 14b.

¹¹⁷ TNA, KV 2/2579, serial 20a; TNA, KV 2/2579, serial 27a; TNA, KV 2/2579, minute 54.

¹¹⁸ TNA, KV 2/2579, minute 59; TNA, KV 2/2579, serial 60a; TNA, KV 2/2579, minute 95; TNA, KV 2/2579, serial 112a, TNA, KV 2/2579, minute 113.

¹¹⁹ TNA, PREM 8/1526, Sillitoe to Rowlands, 12 January 1951.

¹²⁰ TNA, PREM 8/1526, Sillitoe to Rickett, 12 Jan 1951; Note of a meeting at 10 Downing Street on Tuesday 30 January 1950.

friends and colleagues about his character.¹²¹ Davison himself was interviewed by MI5's chief interrogator, Jim Skardon, and he also met regularly with Arnold. During an interview in February 1951, Davison revealed that, prior to leaving the Soviet Union in 1938, Soviet police had tried to recruit him as an agent to inform on colleagues; Davison said he had declined to do so.¹²² Although such information was disconcerting, neither Skardon nor Arnold believed that Davison was, or ever had been, involved in subversive activities. He was regarded as helpful and was willing to share with the authorities any correspondence he received from his family back in Russia. In January 1952, Skardon remarked that Davison was 'behaving with the utmost propriety in this case' which showed 'further evidence of his good faith towards this country.'¹²³

After Attlee lost the 1951 General Election and was succeeded as Prime Minister by Winston Churchill, the new government was informed about Davison's case and they expressed concerns about his continued employment at Harwell. The Paymaster General, Lord Cherwell, recommended that Davison be eased out and found an 'attractive' University post. In August 1953 Davison moved to work at Birmingham University with Peierls.¹²⁴ The news of Davison's transfer was leaked to the press and a report in the *Daily Express* stated that he had been removed from his job and denied access to secret information.¹²⁵ His file recorded that Davison was 'extremely upset' about the *Express* story, seeing it as a smear on his character and he asked the Ministry of Supply to produce a statement supporting his

¹²¹ TNA, KV 2/2580, serial 153a, serial 167a, serial 181a, serial 183a

During this investigation, a further conversation was had with Fuchs in Stafford Prison. He stated that Davison was 'probably the most trustworthy individual' at Harwell. (TNA, KV 2/1257, serial 827a).

¹²² TNA, KV 2/2579, serial 146ba.

¹²³ TNA, KV 2/2581, serial 214a, serial 218a.

¹²⁴ TNA, KV 2/2582, serial 264a, serial 300a, serial 305a; TNA, KV 2/2583, serial 344a.

¹²⁵ 'Atom Scientist Banished', *Daily Express*, 26 August 1953; TNA, KV 2/2583, serial 344b.

reliability.¹²⁶ There is evidence in the file that Davison had also previously been ‘worried and pestered’ by a reporter from the *Express* in 1951.¹²⁷

Concerns about scientists at Harwell continued after Davison’s case. Shortly after Davison had left the Atomic Research Establishment, the *Daily Express* published an article stating that another unnamed atomic scientist had also been removed from his post as he was ‘a security risk.’ By the summer of 1953, foreign-born scientists were considered too great a security issue, and according to the *Express*, Harwell had decided that ‘all scientists recruited...must now be British born of British parents.’¹²⁸ In 1964 it was revealed in Parliament that a total of twelve individuals (civil servants and government employed atomic scientists) had been moved from their posts since the Fuchs case ‘in the interests of national security because they were foreign-born, or because they had relatives living behind the Iron Curtain or because of a combination of both these circumstances.’¹²⁹

The authorities did not believe that Davison, himself, was a security threat and appear to have liked him.¹³⁰ In one interview, Arnold spoke to Davison ‘rather like a father’ and gave him advice about problems in his personal life.¹³¹ There was great sympathy for Davison’s situation. One of the final entries in his MI5 file was a report from Arnold in November 1954, shortly after Davison had departed to a new job at the University of Toronto. Arnold wrote, ‘I saw Boris off from Heath Row’ before concluding ‘May he now be left in peace’. An MI5 official scribbled ‘and so say all of us’ next to Arnold’s remark.¹³²

¹²⁶ TNA, KV 2/2583, serial 347a

There is no evidence that the Ministry did produce such a statement.

¹²⁷ TNA, KV 2/2581, serial 195a.

¹²⁸ ‘Atom Sensation No.2: Harwell ban on another scientist’, *Daily Express*, 28 August 1953.

¹²⁹ Parliamentary Debates (Commons), 703, 1 Dec 1964, 230.

¹³⁰ TNA, KV 2/2581, serial 223c.

¹³¹ TNA, KV 2/2582, serial 263a.

¹³² TNA, KV 2/2585, serial 433a.

The Security Service was faced with a very complex task in assessing individuals. Whilst it was possible for them to prove a positive (that a person was a Soviet agent) it was impossible for them to prove a negative (that a person was not a Soviet agent). The difficulty the Security Service faced was identified by MI5's Ronnie Reed. He wrote that the only way of being certain about an individual's loyalty was to have him under continuous observation and to run letter and telephone checks, which he declared was obviously 'impracticable'.¹³³

In the post-Fuchs environment of early 1950s Britain, and with Anglo-American security cooperation on the line, the decisions security officials believed they had to take were understandable. Unfortunately, this resulted in many cases where the individual concerned was effectively regarded as guilty until proven innocent. In 1956 this shift in policy was formally articulated by a Committee of Privy Councillors, appointed to conduct an enquiry into security procedures in the public services. They made clear that, in the case of any doubt as to a person's connections to communism, it was essential to 'incline in favour of the State rather than the individual'.¹³⁴

Conclusion

In Britain, despite the ramifications of the Fuchs case, scientists were not faced with the kind of McCarthyite witch-hunt experienced by their counterparts in the US. Individuals about whom the security authorities had concerns were rarely subject to the same public scrutiny and shaming as had been the case for an individual like J. Robert Oppenheimer in America.¹³⁵ Any action security officials in Britain deemed necessary to take against scientists was typically discreet. In the initial post-Fuchs era, MI5 did not allow their

¹³³ TNA, KV 2/2579, minute 139.

¹³⁴ TNA, CAB 21/4035, Security Conference of Privy Councillors, Report of the Conference, 24 January 1956, Paragraph 31.

¹³⁵ See, Badash, 'Science and McCarthyism'; Kaiser D, 'The Atomic Secret in Red Hands?'; Gibbs, 303-6, 330-31; Greenspan, *Atomic Spy*, 287.

concerns about individuals such as Herbert Skinner and Rudolf Peierls to prevent these men from working as consultants at Harwell.

Although the British reaction was relatively restrained, Fuchs' espionage undoubtedly led the press and public to develop deeper-seated concerns about some scientists. It also encouraged Whitehall officials to introduce much stronger security measures which principally affected those working in the atomic energy field. Such reactions were unsurprising but caused some scientists to feel threatened. Some, most notably Boris Davison, saw their names published in newspapers and had suspicions attached to them, either because of their association with Fuchs or their alien origin. Foreign-born scientists felt the repercussions of Fuchs' actions particularly sharply, faced a degree of hostility in the press and saw career opportunities denied because of their background. It is highly likely that other innocent individuals were unable to pursue their chosen careers in atomic science due to security restrictions. It may well be the case that in the following decades, talented foreign-born scientists were prevented from taking up certain posts. The stringent security measures enacted may have made Britain safer in denying some individuals access to secret information. However, these measures may also have meant that Britain failed to benefit from the expertise of those who posed no security threat.¹³⁶

E.M. Forster once wrote 'If I had to choose between betraying my country and betraying my friend, I hope I should have the guts to betray my country.' Fuchs, however, did both. He left his close friends not only with feelings of betrayal, but he also left them with a lifetime under suspicion. These effects were best evidenced in the case of Peierls. As a result of his close association with Fuchs, Peierls had to face questions about his own loyalties for

¹³⁶ Rudolf Peierls, memorandum, 'The Lessons of the Fuchs Case', March 1950, in, Sabine Lee (ed.), *Sir Rudolf Peierls: Selected Private and Scientific Correspondence*, Vol. 2 (London: World Scientific Publishing, 2009) 221-2, document 500.

much of the rest of his life. In 1979, he won an apology a 'substantial sum' by way of damages from the publisher of a book by Richard Deacon which had included what Peierls described as 'some damaging and quite unjustifiable statements about me.'¹³⁷ Four years after Peierls' death, Nicholas Farrell wrote in *The Spectator* in 1999 that he had been one of nine Soviet agents working on the Manhattan Project; he based his article on information from the intelligence historian, Nigel West.¹³⁸ Despite the fact that no concrete evidence has ever been produced to justify allegations about Peierls, in some quarters doubts about him still continue to this day.¹³⁹

It may have been that, even if Fuchs had not been involved in espionage, suspicions about scientists in Britain would still have intensified throughout the 1950s. It is certainly true that questions were beginning to be asked even before Fuchs' espionage came to light. However, Fuchs' actions acted as a catalyst, providing those officials, who had begun to have doubts about elements of the scientific community, with concrete evidence that they had been correct in their assumptions. Security officials, concerned about protecting secret information, were keen to demonstrate to the Americans that British atomic secrets were secure and were anxious to avoid the embarrassment of another spy scandal. Fuchs' espionage spurred the introduction of Positive Vetting as officials felt it necessary to be less trustful and take far fewer security risks. Anyone about whom there was the slightest question, was no longer given the benefit of the doubt. Fuchs' actions made it politically impossible to allow those about whom there were minor security concerns to continue in their posts.

¹³⁷ Lee, 'The Spy That Never Was', 95; Close, *Trinity*, 400.

¹³⁸ Lee, 'The Spy That Never Was', 77, 88-90.

¹³⁹ Andrew Percy, *Misdefending the Realm: How MI5's Incompetence enabled Communist Subversion of Britain's Institutions during the Nazi-Soviet Pact* (Buckingham: University of Buckingham Press, 2017), 207-20, 266.

However unfair the suspicion that was placed on numerous, blameless individuals post-Fuchs, it is understandable that British intelligence officials felt that they had no other option but to investigate them. It is impossible to know whether this was effective or not and whether increased security measures prevented other potential spies from slipping through the net. Whilst the Security Service had to be seen to be proactive, trying to take measures to prevent this happening, there was a need to provide a balance between maintaining security and protecting civil liberties. Although individuals' lives were affected, the Security Service strove to maintain this balance.

In passing on information to the Russians, Fuchs appeared not to consider the wider implications of his espionage. He seemingly regarded his actions as a victimless crime, honestly believing he was 'acting in the highest interests of humanity.'¹⁴⁰ It was only following his arrest that he realised the true impact of his actions. Shortly before his trial, Fuchs wrote from prison to Ronald Gunn, with whom he had stayed after arriving in Britain in 1933. He stated, 'I have harmed and hurt so many people...I have done incalculable harm to science, scientists and friends.'¹⁴¹ Fuchs' legacy should have been his major contribution to physics. Instead, he is defined by his espionage. Few individuals, if any, have had a more destructive impact on the reputation of the scientific community in twentieth century Britain.

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¹⁴⁰ TNA, KV 2/1256, serial 756a, 'The Case of Emil Julius Klaus Fuchs: II Analysis of Espionage', 5.

¹⁴¹ TNA, KV 2/1251, serial 493a, Fuchs to Ronald Gunn, 28 February 1950.

Fuchs' actions had actually led MI5 investigate Gunn himself in 1949. (TNA, KV 2/1248, serial 340a; Greenspan, *Atomic Spy*, 234-5; Close, *Trinity*, 417-18).